



# ANNUAL REPORT 2015

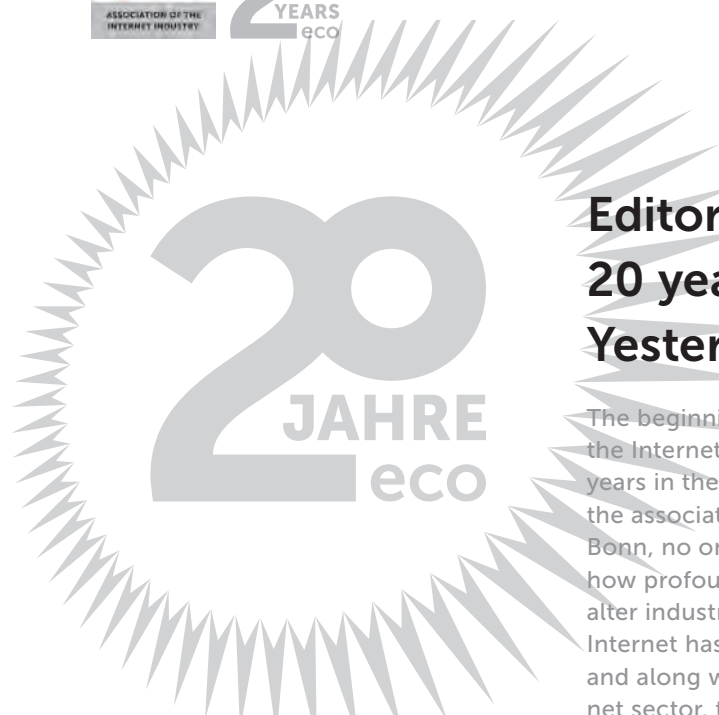




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# Content

■ Editorial – 20 Years eco	4	■ 5. Political Representation	44	■ 10. eco Staff 2015	86
■ Foreword	6	5.1 Legislative Processes and Focus Topics	46	■ 11. eco Members 2015	89
■ 2. Report from the Management	7	5.1.1 Germany	46	■ 12. eco Association Structure and Holdings	92
■ 3. Finances	8	5.1.2 Europe and the World	48		
■ 4. The Association Work	10	5.1.3 EuroISPA	53		
4.1 Reports from the Board of Directors	10	5.2 eco Complaints Office and Youth Media Protection	54		
4.1.1 Policy and Law	12	5.4 Political Communication	56		
4.1.2 IT Security	13	■ 6. Professional Services	58		
4.1.3 Online Services/Cloud Computing	17	6.1 Certified Senders Alliance	58		
4.1.4 Infrastructure & Networks	19	6.2 Cyber Security Services	60		
4.2 Reports from the Competence Groups	24	6.2.1 Anti-Botnet Advisory Center	60		
4.2.1 Datacenter Expert Group	24	6.2.2 Initiative-S	61		
4.2.2 Competence Group E-Commerce	27	6.2.3 Advanced Cyber Defence Centre	62		
4.2.3 Competence Group E-Mail	28	6.3 DE-CIX Management GmbH	63		
4.2.4 Competence Group Games/Streaming Media	29	6.4 DE-CIX International AG	65		
4.2.5 Competence Group Mobile	31	6.5 EuroCloud Deutschland_eco e.V.	67		
4.2.6 Competence Group Names & Numbers Forum	32	■ 7. Event Highlights 2015	70		
4.2.7 Expert Group Networks/Competence Group Infrastructure Security	34	7.1 eco Gala 2015	70		
4.2.8 Competence Group New Work	35	7.2 The New Year's Reception, Cologne	74		
4.2.9 Competence Group Online Marketing	36	7.3 it-sa 2015 – IT Security Fair and Congress	75		
4.2.10 Competence Group Law and Regulations	37	7.4 Internet Security Days 2015: No Freedom Without Security	76		
4.2.11 Competence Group Security	38	■ 8. Corporate Communication	77		
4.2.12 Competence Group Smart Environment	40	■ 9. Statistics	78		
4.2.13 Kompetenzgruppe Unified Communications	41	9.1 eco Members	78		
4.3 eco International	42	9.2 Events	79		
		9.3 eco Websites	80		
		9.4 Press	81		
		9.5 eco Media	84		



## Editorial – 20 Years eco 20 years of shaping the Internet Yesterday. Today. Beyond Tomorrow.

The beginnings of eco – Association of the Internet Industry e.V. now lie 20 years in the past. At the foundation of the association on 26 June 1995 in Bonn, no one could have imagined how profoundly the Internet would alter industry and our private lives. The Internet has long been indispensable and along with the growth in the Internet sector, the tasks of the association also continue to grow – to make the Internet an even stronger and safer tool which enriches our daily life and work.

Today, almost no one questions the importance of the Internet for industry and society. The Internet is ubiquitous. We use it like the air we breathe. Just how dependent we are on it is something we first notice when it's not there for a moment. The Internet has become an important factor along the entire value chain: neither production nor trade, and certainly not the service sector can function without the Internet. In a nutshell, offline is no longer an option.

This development could not necessarily be foreseen 20 years ago. In 1995, a handful of visionaries and pioneers got together, calling themselves "Freunde des Internets" ("Friends of the Internet"). With the foundation of eco in Bonn on 26 June 1995, they founded an association which was to represent the interests of the German Internet industry. It was not yet generally understood that it was possible to earn money with the "Internet". Co-founder Harald A. Summa thought back then that "if 100,000 people were to use the Internet, it would be great". In actual fact, 80.2 percent of German households are now online, according to the German Federal Bureau of Statistics.

### Security an important focus from the outset

eco shapes the development of the Internet, fosters new technologies, infrastructures, and markets, forms framework conditions, and represents its members in politics and national and international committees. Many of the numerous initiatives that eco has breathed life into are dedicated to the topic of security. The fight against viruses, worms, Trojans, and botnets was one of the association's earliest

objectives. The same goes for spam – although it was not only important for eco to filter unwanted messages, but also to reliably deliver the ones recipients want.

How successfully private-sector initiatives can influence political re-thinking of important issues has been demonstrated by the eco Complaints Office – thanks to which, illegal Internet sites can be taken offline as quickly as possible, in particular those that endanger young people. "Deletion instead of blocking" is a process which has made it into law through the efforts of eco. One example is the reporting of Internet sites with Child Sexual Abuse Material (CSAM) – on average, it takes only 2.38 days for the illegal content to be taken offline, from the time of the report being made, even when the content is hosted abroad.

### Shaping requires infrastructure

eco realized very early that the Internet could only be successfully shaped with investment in infrastructure – and has run the Internet exchange point DE-CIX in Frankfurt as a wholly owned subsidiary since 1995. Its locational advantage reaches far beyond the bor-



ders of Germany and encourages many international companies to establish a physical presence there.

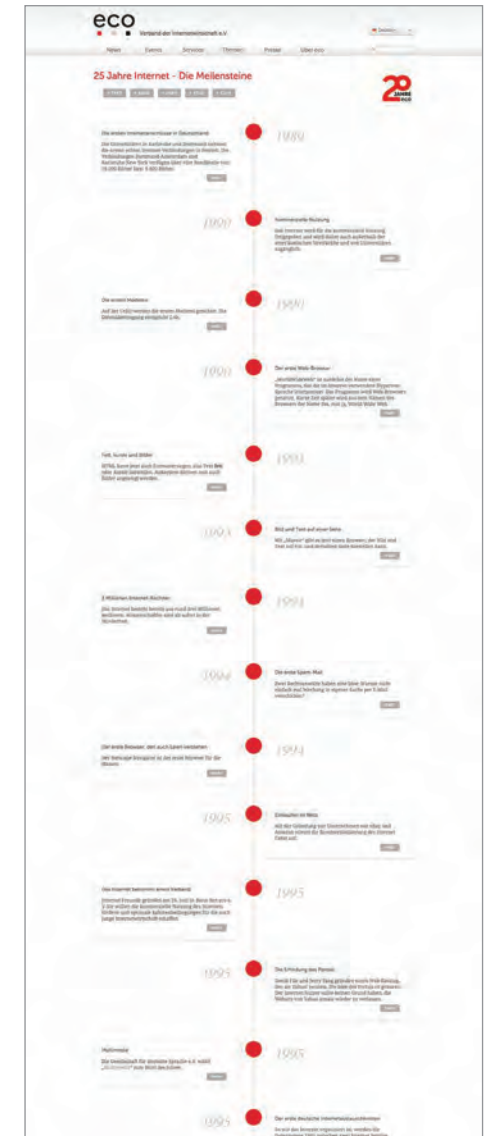
### The Internet is nowhere near finished

Whether it is in the area of policy and law, security or New Work, the list of tasks for eco is not getting any shorter – but longer and longer. Key concepts such as blanket data retention, third-party liability for Wi-Fi providers, net neutrality, Internet governance, IT security, and data protection show that there are still many open questions, including some quite fundamental ones. The Internet industry is still young. The digitalization of the entire economy has only just begun. "The Internet is nowhere near finished," according to Summa. "There is still room to move in the question of how the Internet will develop in the next 20 years. For us as an association, this means the best is still to come!" With more than 900 member companies, eco is the largest association of the Internet industry in Europe today – and is getting ready for further growth, in order to continue covering the entire bandwidth of the Internet industry into the future.

Whether the Smart Home will enjoy its final breakthrough into the German mass market in 2016, or nanotechnology will replace flash drives by 2020, or intelligent shopping trolleys will have penetrated the market, just like semantic searches in the Internet have, or biometric finger prints will replace the PIN at ATMs – or whether the working world 4.0 will have established itself in many sectors by 2030... eco will, together with its members, keep its finger on the pulse of the era and shape the Internet: Yesterday. Today. Beyond Tomorrow.

... and remain "the association with a difference".

Excerpt from the eco Timeline  
The complete Timeline can be found at:  
<https://www.eco.de/20-jahre-eco-timeline.html>





*Prof. Michael Rotert  
Chairman of the Board*

## Foreword

Dear Readers,

Alongside our Internet hub DE-CIX, the Internet Corporation for Assigned Names and Numbers, ICANN for short, counts as one of the central supporting columns for the technical interplay in the World Wide Web. After all, ICANN coordinates the allocation of unique names in the Domain Name System (DNS) and IP addresses in the Internet.

In the past, we often heard the reproach that ICANN is an organization dominated by the USA. That's why it impacted like a bomb when, on 14 March 2014, the NTIA of the US Department of Commerce decided to relinquish one of its supervisory functions.

However, the NTIA set four conditions which need to be fulfilled before they are prepared to hand over the supervisory function, or "Stewardship". One of these is that the multi-stakeholder model should be encouraged and supported. In other words, the supervision of ICANN should in future involve all groups participating in the Internet – as a result, the simple transfer of the authority to another country was and is not an option.

Why is this so remarkable? Well, in one fell swoop, everyone was addressed. Referred to in the jargon as the "multi-stakeholder" approach, representatives of civil society, industry, the academic sector, technology, and, of course, governments were called upon to develop a proposal for the future supervision of ICANN.

With the help of eco, a meeting of all stakeholders at the national level was organized in Germany. In this circle, joint proposals were developed and discussed, looking at how the transfer of the stewardship could be managed from the German perspective. A thoroughly remarkable achievement – after all, all participants were involved as equals in the discussion.

The result, supported by all groups involved in the German part of the Internet, was not simply an impressive achievement. It was also a model for all further proposals that ICANN was to receive for the development of the global proposal for the reform of the supervisory functions. We can be excited about the result. eco has been more actively involved in the process than almost any other organization; in particular due to our Competence Group for the topic Names & Numbers.

The technical layer is one of the strengths of eco. But policy work also stands as one of our core competencies. It is not necessarily a disadvantage that policy does not always manage to keep up with the pace of development in the Internet. In the end, not everything needs to be regulated, sanctioned, and not every trend has to be followed. However, given that the German federal coalition has developed a digital agenda, at least something should have happened in the year that has since passed. Visible progress has hardly been apparent, and this means that we need to take even more

initiative in the cooperation, in order to develop reliable guide rails for our members, together with the bodies concerned, rather than senseless laws. We here in eco also developed an agenda for up to 2020 in summer 2015, and we will be measured on our implementation of this. So far, we're heading in the right direction.

Looking at these examples, dear reader, you can see that every year we are faced with new challenges – which we are happy to take on and work with for the benefit of our members.

In this spirit, I wish to thank all members, the eco management, and, of course, all of the staff for their trust and valued cooperation. I wish you – and the internal and external experts with whom we work – all the best and great success in the current year.

Your

**Prof. Michael Rotert**  
Chairman of the Board



Harald A. Summa  
CEO

## 2. Report from the Management

Hello, and what a year it's been! Just 20 years old and my baby's giving it all it's got. You'll probably still read more about the 20th birthday in this report, but there's one thing I need to get off my chest. Everything that we have in and with eco today is thanks to the following people, among others:

Firstly, there's Axel Pawlik – 20 years ago still CEO of EUnet GmbH, one of the first Internet service providers in Germany, today the boss of RIPE. Back then, he gave me an assignment that allowed me to implement the idea of the electronic commerce forum e.V., as the association was originally called. It still took me about 18 months to drag the required seven foundation members to the notary, and then at the last moment, we were one person short. A valiant

decision by Stefanie Zabel, who was standing in the corridor with her friend Holger Gruel, gave us the chance to found the association. In those early days, I was the first Chairman of this tiny seedling. It's thanks to a further person that we were able to really take off: Michael Schneider declared himself prepared to take over the board and allow me to concentrate on the operative business as CEO. Thank you, Michael!

And another three people should be thanked at this point: Andreas Schachtner, Dr. Bernd Biedermann and Arnold Nipper. These three upstanding gentlemen placed, without hesitation and in good conscience, the management of DE-CIX in the hands of the young association. Everything that followed is history and a good story at that...

But let's come back to the Report from the Management.

We can give the financial year 2015 the heading "Renewal", but also "Consolidation". "Renewal", because we want to grow more strongly through our cooperation with close association partners. "Consolidation", because we have sworn in the many new colleagues who have joined us in the last 18 months, and integrated them into our shared tasks and responsibilities.

We have been working with networker NRW for many years now. Over time we realized that this collaboration could offer both sides considerably more if we share resources rather than duplicating them, and present ourselves to politics and industry with the power of two associations under one roof. This has been manifested in a cooperation contract which came into effect on 1 January 2016. We came to the same arrangement with Digital Hub FrankfurtRheinMain. Same approach, same result: together we're stronger!

In the model of cooperation we have developed, we think it is very likely that we can achieve similar results with further associations and allies. Following the idea of "not absorbing, but cooperating closely, with the retention of individual identities", we are speaking with further associations, with the objective of anchoring eco more strongly in the regions.

With Werner Theiner and his network in Munich, we have created this for the southern German region, and we will be present there in the coming months and years with events and services.

We actually had the goal of welcoming the thousandth member by the end of 2015. An ambitious goal, which we nearly reached. Oh well, 900 members is also a great achievement!

So that goal remains for 2016. So that we can really achieve this, we are working hard with our staff to make them even better qualified and to make them an even stronger team, so that you, dear member, are satisfied with your membership.

Everything else that 2015 brought with it can be read in the following pages. Time and again, even I am astounded by what we have accomplished in one year, and we are all proud to be a part of eco. I hope you are too!

We look forward to further challenges.

Harald A. Summa  
CEO

## Board

### The eco Board 2015

Prof. Michael Rotert

Chairman of the eco Board  
maxspot GmbH

Oliver J. Sümé

Vice-Chairman of the Board  
Director Policy & Law  
Attorney-at-law / Specialist Solicitor  
for IT Law

Klaus Landefeld

Director Infrastructure & Nets  
nexiu GmbH

Thomas von Bülow (until June 2015)

Director e-Business  
Bitobito GmbH

Felix Höger

Director Online Services /  
Cloud Computing  
Höger Management GmbH

Prof. Dr. Norbert Pohlmann

Director IT Security  
Institute for Internet Security – if(is)

## 3. Finances

As in previous years, the eco Association grew significantly in terms of member numbers during the financial year 2015. The year brought an increase of 70 members and additional revenues of EUR 180,275, corresponding to a 13 percent growth in turnover. In direct comparison to the previous year, total income reduced, which is the result largely of the conclusion of funded projects. On 30 June, the project "Regional Cooperation Structure IT Security" was successfully concluded, as was the European Commission funded project "Advanced Cyber Defense Centre" (ACDC) on 31 July.

The ACDC project is currently in the final auditing phase at the EU. After confirmation of achievement of the project objectives, we expect additional revenues from the release of the final installment.

Through the conclusion of the funded projects in the IT security area, we have now applied for a subsequent project called SIWECOS, whose approval by the grant authorities has been delayed until mid-2016. As a result, the majority of the revenues will shift to the year 2016/2017.

Nevertheless, we are constantly researching new projects for IT security and cyber defense, in order to further anchor this extremely important topic in the association in the coming years.

Although the CSA achieved a total growth of 6 percent, the ending of a range of cooperation contracts for the Anti-Botnet Advisory Centre meant a reduction in overall revenue.

The reduction in income from events is a result of the fact that the organization of the eco Gala was handed over to eco Service GmbH in 2015. With this step, all events are now run through our service provisions company, eco Service GmbH.

The results from the subsidiaries are generally positive. For eco Service GmbH we experienced a slight loss, among other reasons because of a write-off of receivables – which could, however, be balanced by bringing forward the profit from the previous year.

In 2015, we successfully implemented receivables management, and with this, we had the lowest volume of receivables that we have had in many years on the 31.12.2015.

The year 2016 will see further automation of our internal processes. At the end of the second quarter of 2016, we will be implementing the new Customer Relationship Management (CRM) system "MS Dynamics", which will bring membership management and especially financial processing up to date.

Through the cooperation between eco and the IT associations networker NRW and Digital Hub FrankfurtRheinMain, which took effect on 1 January 2016, we expect a large potential for savings on costs, and also an increase in member numbers through the dissemination of the eco "brand" in the German federal states North-Rhine Westphalia, Hesse and Bavaria.

Revenue and Expenditure in 2015					Budget for 2016	
eco e.V.	Actual value 2015 in Euro	Percentage	Actual value 2014 in Euro	Change from preceding year (%)	Planned for 2016 in Euro	Percentage
Revenue						
Member fees	1,561,500	55.9 %	1,376,225	13.5 %	1,600,000	54.3 %
Public funding	367,478	13.2 %	587,178	-37.4 %	488,000	16.6 %
Generated proceeds	712,503	25.5 %	835,096	-14.7 %	800,000	27.1 %
Events/ Sponsoring	0	0.0 %	192,375	-100.0 %	0	0.0 %
Other*	150,099	5.4 %	57,335	161.8 %	60,000	2.0 %
Total receipts	2,791,580	100.0 %	3,048,209	-8.4 %	2,948,000	100.0 %
Expenditure						
Personnel costs	1,237,993	45.5 %	1,331,819	-7.0 %	1,359,000	46.3 %
Administration costs	153,708	5.6 %	127,192	20.8 %	190,000	6.5 %
Occupancy costs	138,327	5.1 %	118,023	17.2 %	145,000	4.9 %
Contributions	29,881	1.1 %	32,718	-8.7 %	42,000	1.4 %
Travel costs	105,895	3.9 %	103,797	2.0 %	146,000	5.0 %
Investments	27,899	1.0 %	16,318	71.0 %	65,000	2.2 %
Marketing/Projects	851,602	31.3 %	1,145,797	-25.7 %	811,000	27.6 %
Administrative accounting/legal costs	79,413	2.9 %	45,272	75.4 %	55,000	1.9 %
Other/taxes	97,790	3.6 %	94,925	3.0 %	125,000	4.3 %
Total costs	2,722,508	100.0 %	3,015,861	-9.8 %	2,938,000	100.0 %
Surplus/ deficit	69,072		32,348		10,000	

\* Other revenue: charging benefits for cars, loans etc.



Prof. Michael Rotert  
Chairman of the Board



## 4. The Association Work

### 4.1 Reports from the Board of Directors

As in every annual report, the Board of Directors report on the work undertaken again this year. You will find the details on the following pages.

Alongside the normal association duties and participation in committees and bodies that are important for our members, eco is also a sought-after participant in many events, providing, for example, keynote speakers, presenters, and members of discussion panels. Our competence in Internet-related fields is recognized and very much in demand. Our message convinces with technical facts, rather than with flowery marketing statements.

For this reason, I could simply have copied my figures from last year directly across, as the requirements remain unchanged. Of particular note in 2015 were our activities for eco's 20th "birthday". Upon reaching such an important milestone, a typical question is where we actually stand today. The development can clearly be seen – with over 900 member companies in 2015, eco is the largest Internet industry association in Europe. Since 1995 we have been instrumental in shaping the development of the Internet in Germany, fostering new technologies, infrastructures and markets, and forming framework conditions. In the Competence Network, all important specialists

and decision makers of the Internet industry are represented, and current and future Internet topics are driven forward, together with a team of more than 60 staff. Special eco services help to make the market more transparent for providers and users, and our seal of approval ensures quality standards. With our consultations for members and our services for users, we provide support in questions of legality, we increase security and we improve youth protection. As an association, one of our most important tasks is to represent the interests of our members in politics, and in national and international committees.

It is understandable to celebrate past successes, but the year was not only about celebrations and parties. Rather, we took advantage of the occasion to shape the future in a strategy meeting. We have set ourselves clear goals that we wish to achieve by 2020, and we have differentiated between market-related, organizational and financial objectives. So, for example, we envision strengthening our influence in individual German federal states through cooperation with existing associations. From an organizational perspective, over the next five years we want, for instance, to develop a Competence Group concept which representatively integrates our members, produces more



content-related results, and acts in a project-oriented manner.

With this strategy meeting, an important milestone was reached in 2015. Further important occurrences and results can be found in the reports from my colleagues from the board, the reports from the Competence Groups, and the reports from our professional services.

Still to be mentioned is the financial development of the association, which is pleasing and has been excellently managed by the CEO Harald A. Summa and his Finance Department. Details can be found in Chapter 3.





*Oliver J. Süme, Attorney-at-Law  
Vice-Chairman of the eco Board*

*Dr. Sandra Schulz  
Head of Policy & Law*

*Henning Lesch, Attorney-at-Law  
Head of Law and Regulations*

## 4.1.1 Policy and Law

The political year in 2015 was shaped at both the national and European levels by a range of legislative proposals which touched on core areas of the industry and especially impacted fields in which eco has been particularly involved.

The reintroduction of blanket data retention affects the interests of our members at least as much as an intensification of provider liability, which was first discussed in 2015 when brought to the table for a "Wi-Fi Law" and associated intended changes to the Telemedia Act. At the European level, the General Data Protection Regulation finally brought into the home stretch a proposal which is of elemental importance for the entire Internet industry value-chain. For the first time, from spring 2018 on, personal data can be processed on the basis of a unified legal framework for data protection, and there will be an end to the fragmentation of the European Economic Area. This is an important orientation for almost all other industry areas, which are increasingly dependent on IT and Internet-based data processing.

The same goes for the topic IT security. Here, important developments for the industry have occurred with the adoption of the German IT Security Act in 2015. Regrettably, on this matter the legislator pressed ahead without waiting for the adoption of the European NIS Directive – the objective of which is to create a harmonized Europe-wide regulation for the security of critical infrastructure.

Unfortunately, unilateral national legislative action in the area of network policy is not only a German trend. It is paradoxical – while the Internet industry and the entire economy is becoming increasingly interconnected and interdependent, the tense security situation is increasingly leading to national unilateral actions by many Member States. At the same time, the European Commission has proclaimed the completion of the digital single market as

a top-priority project, whereby the varying legal regulations, for example, for copyright, have finally been recognized as a barrier to innovation and should be abolished.

The variety and complexity of the different national and international legislative proposals represent a particular challenge for eco, but we are not meeting it unprepared. We expanded our team in Berlin in time and employed further new staff in 2015 in order to take account of the full range of political topics and to ensure a high level of competence and a credible hearing in political circles of the positions of the Internet industry. The team under Dr. Sandra Schulz is not only highly motivated, it also has at its disposal excellent expertise and experience. Our content-related work for taking positions on legislative initiatives, and also the repeatedly outstandingly



Prof. Dr. Norbert Pohlmann  
eco Director IT Security

frequented political events have contributed considerably to our being able to, again in 2015, jointly shape the legal framework conditions for the Internet industry on behalf of the entire sector.

## 4.1.2 IT Security

For those of you who do not know me yet, I would like to start by introducing myself.

### Prof. Dr. Norbert Pohlmann

I am Professor of Informatics for Distributed Systems and Information Security, and Managing Director of the Institute for Internet Security at the Westfälische Hochschule, Gelsenkirchen. Before this, from 1988 to 1999, I was active as Managing Partner at the company KryptoKom, Gesellschaft für kryptographische Informationssicherheit und Kommunikationstechnologie mbH. After KryptoKom merged with Ultimaco Safeware, I was Member of the Board at Ultimaco Safeware AG from 1999 to 2003.

Since April 1997, I have been Chairman of the German Federal Association for IT Security, TeleTruST, and since May 2015, Member of the Board for eco – Association of the Internet Industry e.V., covering the topic of IT Security, and Board Member of EuroCloud Deutschland\_e.V..

### IT Security is the challenge of our society

The Internet, with its multifarious innovative possibilities, has become highly relevant in our modern society, and will continue to increase in significance even further and faster.

The attack targets of IT and Internet technology are becoming more various and considerably larger, due to more complex software and complicated relationships between protocols,

services and global infrastructures – something we can see in the reports of the successful attacks by professional hackers.

The attacks on our increasingly valuable IT systems and their accessibility are becoming more distributed, more refined and more professional in their execution, causing damage running into the billions. IT criminality is undergoing an increasing industrialization and along with this has developed a not to be underestimated and unprecedented professionalized sustainability, which is reflected in the probability of successful attacks.

Since the beginning of the Internet, we have seen that IT security problems always increase in size, never decrease. We currently have a great imbalance between attackers and defenders.

## IT security problems

In the critical assessment of the current IT security situation, several IT security problems stand out in particular, and these must be solved urgently, in order to build more of the required IT security and trustworthiness.

### Too many vulnerabilities in software

Software represents an ever-increasing proportion of value creation in all sectors. We use software in PCs, notebooks, smartphones, in very large data centers, and also increasingly in cars, in production plants, at home... One large IT security problem is that there are too many errors/vulnerabilities in currently-used software. The software quality of operating systems and applications is no longer sufficient for today's threat situation.

The error density, the number of software errors per 1,000 lines of code, is, on average, 0.3 for high-quality software today. Given that standard operating systems have around ten million lines of code, that means that, on average, 3,000 software errors are present. A portion of these errors are targets for successful attacks. In the large operating systems and applications, no rapid improvement in software quality is to be expected in the next ten years – and even if it were, the professional attackers will be able to exploit the decreasing number of software vulnerabilities more professionally for successful attacks.

Here, we need modern IT architecture that, with the help of security kernels, stronger isolation and virtualization, can secure the end devices considerably more robustly against attacks.

### Insufficient protection against malware

Malware, short for "malicious software", is harmful software like viruses, worms and Trojans. Attackers such as criminal organizations, political or industrial spies and terrorists exploit software vulnerabilities and human deficiencies to install malware on IT devices.

Via email attachments, or insecure websites with the help of Drive-by Downloads, malware is generally installed on end devices unbeknownst to the user. In the case of a botnet, a group of IT devices that are under the central control of an attacker are used for the attack. Through this, attackers can read information from the end device (with keyloggers, Trojans), use the device for distributing spam and for DDoS attacks, and even, for example, encrypt data and demand a ransom for the decryption. In the case of ransomware, the attackers encrypt important information on the device with the help of malware and demand from the owner not inconsiderable amounts of money for the key to decrypt the data.

We must be very critical of the fact that the anti-malware products available today demonstrate a 75 to 90 percent detection rate, which is too weak. For targeted and direct attacks on IT systems, the detection rate is, on average, a mere 27 percent. With the eco service "botfrei" ([www.botfrei.de/en](http://www.botfrei.de/en)), eco makes an important contribution to helping Internet users with this problem. If all providers were to participate in the project, then Internet users could be even better supported.

### No international solutions for identification and authentication

In 2015, we still use passwords for authentication in the Internet. We all know the problems: use of bad passwords, or one good password which gets used for many applications. Passwords are still transmitted by email through the Internet in plain text. Many Internet users still fall for phishing emails that tap passwords. The tapping of passwords with the help of keyloggers also represents a big IT security problem. There are already modern, secure and user-friendly authentication mechanisms which we must introduce for a higher level of IT security. The FIDO Alliance from the USA also creates standards which make this process easier to implement.

### Insecure websites in the Internet

Today, malware is distributed largely via insecure websites. In its project "Internet Kenn-

zahlen System", the Institute for Internet Security has found that of the German websites measured, malware is directly or indirectly present in around 2.5 percent – which can result in visitors to these websites becoming infected with malware.

The background to this is that companies make websites available in the Internet that are not developed securely enough, with the result that attackers can contaminate them with malware. When visiting the company website, the company's own customers, among others, become infected with malware. The problem with websites is that too many companies and authorities only place value on user navigation, color, and their own design, and not on IT security – something which is important for the user. It would be as if a logistics company were to use trucks without brakes in traffic. The companies take no responsibility for the IT security of their own website.

Here, eco will, in conjunction with a BMWi project, make available further innovations generated out of the experience gained in the eco service "Initiative-S" that will help to reduce the problem of insecure websites.

### New dangers through the use of mobile devices

The advantages of mobile devices like smartphones and tablets are very attractive. Over the multitude of communication interfaces



(e.g. UMTS/LTE, WLAN, Bluetooth, NFC), the Internet and its services are available constantly and everywhere. Very powerful end devices can be used almost everywhere, and are simple to use with touch screens. Mobile devices are multi-functional: phone, sat-nav, music, TV, medical/health device, company access, Internet services, and universal computer/apps – all in one mobile device. With "Local Based Services", useful and innovative local services can also be added.

With these mobile devices, however, new attack vectors also arise which cause further risks. Constantly changing insecure environments (airports, train stations, cafés) increase the risk of loss and the targeted theft of mobile devices on which increasingly valuable data is stored. The danger of the generation of a movement profile and the simple possibility of public inspection should not be underestimated. The use of "bad" apps, meaning malware on our mobile devices that can read our data, is becoming more probable through the principle of "mass not class" and untrustworthy app stores.

However, the use of wrong or manipulated hot-spots, "just quickly to check emails" is also becoming a more and more frequent point of attack. A further source of danger for companies is the parallel use of mobile devices for private and professional purposes (for example, Bring Your Own Device). A big problem here is that most mobile devices are designed

for the consumer market. The providers follow the strategy of designing the device – such as the iPhone – for the lowest common denominator, the stupidest possible user. To begin with, everything works, but when the user wants more security, then he or she needs to set limitations, something he or she normally cannot do. The right business strategy would be to have it so that at first nothing works, and the user needs to activate the functions that he or she needs for carrying out necessary tasks! Through this, the attack surface of mobile devices would be considerably reduced.

### **An email is like a postcard!**

There are no guarantees about the trustworthiness of email service provision! Passwords, credit card numbers and further banking data, as well as other confidential information are transmitted in plain text and thus represent a big risk. The possibilities to tap into an email are very high. In some countries, all emails are analyzed in order, for example, to get access to the know-how of companies from other countries. As a result, emails are currently a further large risk factor.

We have heard of the studies and surveys showing that, at the moment, too few emails (probably only five percent) are encrypted. For this reason, staff in companies should be given access to email encryption technology. Typically, two different standards are used, as a rule. One of these is S/MIME, which is being

increasingly employed in larger companies, and the other is OpenPGP, which can be operated quickly and independently on IT end devices, without the company server. Staff also need to know how and – very importantly – when these encryption technologies should be used for confidential emails.

Here, eco should – together with members – motivate more users to make use of encryption. This is also the case for other areas: VPN, SSL, chat, end devices...

### **Business Model: Paying with personal data**

Social networks like Facebook, dating services, YouTube, XING, LinkedIn, Twitter, etc., bring together users from a range of social groups and make it possible for them to present themselves and to meet in the real world. Social networks also create new ways to shape democracy and public participation, which represents a new and unusual challenge for all involved. Social networks also encourage discussion about informational self-determination and data protection!

One question which arises here is to what extent Internet offers which we pay for with our personal data rather than with money should be tolerated. We allow the providers and their partners to earn money indirectly through our acceptance of their T&Cs. Operators of social networks build user profiles from

the collected personal data of their users, which are used for the sale of goods and services, because they enable custom-fit, individualized advertising. Operators of many social networks are well paid for targeted marketing through the placement of individualized ads.

This principle of "payment with personal data" is also used in other services, such as search engines, and email and news services. But personal data is also collected in the area of e-commerce, such as by the online retailer Amazon, in order to be able to offer customers individual deals. Here, our necessary and essential personal rights are strongly affected. The challenge in this area is to inform the users of the risks and to find and to implement appropriate solutions, together with the providers of social networks.

Only a clear overview of your own personal data that is stored by the Internet service providers can help to ensure your movements in the Internet are self-determined.

What is the social perspective of the varying IT security problems?

### **Industrial espionage**

Let's look firstly at industrial espionage, which results, according to the German Federal Ministry for Economics, in EUR 50 billion in damages per year. We cannot afford this as a knowledge society! The vulnerability of our IT

is increasing constantly at the moment, and our assets are at greater and greater risk. We need to become active immediately and introduce, together with the appropriate stakeholders, appropriate IT security measures, in order to more effectively protect our assets as a knowledge society.

### Value of privacy

As a second and very important aspect, we should discuss the value of privacy, which plays a vital role for every citizen. A society that depends on the individual economic and political responsibility of each member must in turn protect that which makes up the individual as a member of society and as an economic factor: on the one hand personal integrity and on the other material possessions. When we as a society are no longer capable of fulfilling these requirements, then we have lost a part of democracy, our freedom.

### Cyber war

A further and increasingly more important aspect is cyber war. Attacks on critical infrastructure represent a greater vulnerability of our society and are a further important challenge.

Stuxnet taught us that intelligent malware for a political target could be very successfully and simply implemented, at a cost of around nine million US dollars. With the intelligent

malware Stuxnet, the Americans and Israelis were able to delay uranium processing by two years. The terrible alternative to achieving this political objective would have been to have over 200,000 soldiers march into Iran – which would not only have cost several billion US dollars, but would have put lives at risk. We need to take a professional approach to the reality of cyber war.

With the German withdrawal from atomic energy, we have as a society taken a courageous path. However, the energy revolution is resulting in more risk for power supply, as the power grids and their components are being connected in order to become more intelligent, and therefore more efficient. Through this, the risk of interruptions in the power supply through Internet attacks, and, with that the functionality of our society, is rising substantially. This means that we must make sure that our energy supply and other infrastructures which are critical for our society are secure and robust against cyber-attacks.

### The challenges

We know the IT security problems, but the IT security systems and IT security measures available and being used today do not reduce the IT security risk sufficiently! Future attacks will substantially exceed the damage being done today. We need innovative approaches in the area of Internet security, in order to reduce the risk to our society to an appropriate level.

### Outlook

The presentation of the IT security situation and the description of several IT security challenges shows us clearly that we in the eco Association have many possibilities for ensuring that we build our future on the foundation of a secure and trustworthy Internet, so that, in future, we can use the Internet with fewer risks and worries.



Felix Höger  
eco Director Online Services / Cloud Computing



existing equipment fleet, but will rather bring everything into proper disarray. A Europe-wide stocktaking shows, as previously, a great need for clarification for continental companies. The reservations and uncertainties are great, particularly in SMEs – for example, in questions on the legal framework conditions and on security. The DsiN Cloud Scout Report from the EU Commission, which eco and EuroCloud contributed to, shows that we need not only to shape digital transformation from a technological perspective, but also from a political, legal and economic perspective, so that companies and people in Europe can benefit from it.

### Five years of pioneering work for the German and European cloud market

The eco Association has been accompanying and jointly shaping digital transformation in Germany and Europe from the very beginning. In 2010, when no one here in Germany even knew the term cloud computing, eco and partners throughout Europe laid the groundwork for a European cloud sector. In 2014, the German national society EuroCloud Deutschland\_eco e.V celebrated its fifth birthday. Today, everyone is talking about digital transformation. But our work is just beginning.

Our mission is to create a reliable framework and standards for the cloud industry on the continent, to build trust and to explain the economic opportunities of the digital century to companies. One of the most recent results

## 4.1.3 Online Services/Cloud Computing

New all-purpose technologies not only represent technical problems for us. Their greatest challenge is in the mind: Already, nine out of ten companies want to be well equipped for digital transformation, as a survey by the IT research and consultancy firm Crisp Research found. The same survey showed that 61 percent of those questioned see themselves as being driven by digitalization. This contradiction allows us to see that we are just at the beginning.

### Digitalization needs new mindset

It was no different 120 years ago from today, as the two MIT economists Erik Brynjolfsson and Andrea McAfee show in their book "The Second Machine Age". Back then, America's industry began to electrify their factories. But it took 30 years after implementing the new technology before productivity grew. The incumbent management generation only replaced the old steam-driven machines through electric motors. It was their successors who finally started building new factories to exploit the flexibility of electrical generators and motors. With this example, Erik Brynjolfsson and Andrew McAfee call for a change in our mindset. Only then will today's compa-

nies be able to effectively use the chances of the digital age. Cloud computing is for digitalization, what the electrical motors and generators were for the second industrial revolutions. The analysts from Crisp Research identify data centers as the "epicenter" of the present transformation of our industry. But only few companies recognize here a new paradigm of how we deploy digital technology. Most see at most a further variation for the provision of storage and processing power. They only replace physical servers with virtual ones.

The disruption – something which many sectors fear – will only happen when innovators build new companies round the cloud. This is definitely the case for successor technologies, such as Big Data, mobile IT, the "Internet of Things" and finally machine learning – they will not be seamlessly integrated into our

of this work is Trusted Cloud. The seal of quality developed in conjunction with the German Federal Ministry for Economic Affairs and Energy during 2015 and presented at CeBIT 2016 stands for minimum standards with regard to the transparency, security, quality and legal conformity of cloud services. The Trusted Cloud should above all provide small and medium-sized companies with orientation in the choice of appropriate services from the cloud.

#### Trust in the security of the cloud

The Trusted Cloud is only one of many milestones of our work at eco and EuroCloud Deutschland in the past few years. From the very beginning, we have taken up the pressing topics for German companies, data protection and data security. Back in 2010 already, EuroCloud Deutschland presented the guidelines "Cloud Computing – Recht, Datenschutz und Compliance", which answered many questions on security and the legal foundations for the cloud.

#### Encourage quality standards and knowledge exchange

One year later, we applied ourselves to the second big topic; standards – indispensable for trust in the new technology. In 2011 we created, with the EuroCloud Star Audit, the basis for unified quality standards in the German cloud market. In the next three years, further insti-

tutions were created, including the EuroCloud Roadshow, the EuroCloud Deutschland Conference and the EuroCloud Deutschland Awards, through which we identify the best providers and encourage knowledge exchange in the market.

In addition, we support end-user companies to engage in the new cloud paradigm and to bring projects to a successful conclusion through a variety of training sessions, webinars, and more recently through the Guidelines on Cloud Project Marketing.

#### Work for the European cloud industry

The association has also pushed the development of the cloud industry at the European level: from the "16-Point Action Plan for Cloud Computing in Europe" to the EU initiatives for the creation of standards (ETSI), quality (certification) and legally watertight contracts taking data protection into account, through to the support of EU Commission working groups (EU Cloud Select Industry Group) in which the focus has been on developing the topics certification, SLAs, and the Data Protection Code of Conduct.

Today, more than five years after the founding of EuroCloud Deutschland, we are experiencing the breakthrough of cloud technology in Germany and Europe. According to a study by the market research company International Data Corporations (IDC), by 2015 20 percent of

companies in Germany were already using cloud services, one third more than in the previous year. In this and the coming year, almost 60 percent of surveyed companies plan to set forth into the cloud. Digital transformation is well on its way.

#### The second half of the chess board

There is one warning from the MIT economists Erik Brynjolfsson and Andrea McAfee that we should take to heart: in contrast to our predecessors at the end of the 19th century, today's companies do not have 30 years to open up the possibilities of digitalization for themselves. According to the authors, the speed of innovation of digital transformation is accelerating exponentially. Technological successors, such as Big Data, mobile IT, the "Internet of Things" and machine learning will change our companies and our society on a broad scale.

They illustrate their warning with the well-known metaphor of the author, futurologist and Head of Development at Google, Ray Kurzweil: the second half of the chess board. The inventor of chess, 1,600 years ago, wanted to be rewarded by the Indian emperor and asked that rice grains be placed on every square of the board so that they were double the rice grains on the previous square. In the first half of the chess board, the reward was in the range of a rice field harvest. However, in the second half of the chess board, the number of rice grains, through the constant doubling,

would soon have exceeded any available amount on earth. And that's exactly where we are, given the speed of innovation of digitalization, according to Kurzweil and the two MIT economists. The changes will continue at an exponentially increasing speed. Every day, the development of a new, surprising tipping point can be reached. So there's no time to sit back and relax or wait out the developments.



Klaus Landefeld  
eco Director Infrastructure & Networks

### 4.1.4 Infrastructure & Networks

The "Internet of the Future" should develop out of today's Internet, with all errors of the past removed, and at the same time offering secure, fast, versatile, inexpensive and, of course, ubiquitous availability.

Is this possible? It seems at the moment as though the requirements are developing more rapidly than is practically implementable. The roll-out of new technologies in the network can sometimes take years, and a technology that is still in development is to a certain extent out of date by the time it even makes it to the customer. The era of the 20 or 30-year investment has been left long behind us – then it was 10 year, then seven years counted as more or less normal in the telecommunication

sector. But where are we today? At five years? Or even only three? Even for the "hard" infrastructure, like cables and housing, planning and investment security often no longer exists; we learn this from the debate surrounding technologies like vectoring and the regulatory environment. Network and IT security is also progressing, but we're still waiting for the masterstroke, the milestone.

But then, now and again we face eyebrow-raising requirements that stimulate deeper contemplation – as is happening with the catalog of requirements for 5G networks. Yes, of course we can imagine today a downlink speed of 1Gbit/s – that's not such a big step and only a slight improvement of the existing data rates, which amount to 100 to

400 Mbit/s in good network situations. In FTTH networks we're already achieving this. It gets more interesting with the "interactive services" and the associated specification of a "round trip time" of only one millisecond. Because, even if we tone this down to a speed of "under ten milliseconds", we need to contemplate completely different forms of data processing – more regional, with de-centralized exchange structures, with data centers and IT infrastructure in many locations. This is the fault of physics: the processing of interactive services – and this will include traffic telematics, alongside games and multimedia content, for example – will need to be carried out in data centers with a maximum distance from the location of the user of considerably less than 100 kilometers.

What will be the result of this for our industry? What will this mean for the current trend towards centralization? Are mega data centers going to be sustainable into the future? How do cloud applications need to develop in order to offer their services regionally? What form will their loads take in order to distribute the instances to support such a profile of requirements? And how do we de-centralize the transition from access infrastructures or organize the traffic routing in the region among providers?

As soon as you start to think about it, further questions arise resulting from this: How can we, for example, ensure data protection and

data integrity, like redundancy, backup or similar concepts – for a mobile customer who logs on again 20 minutes later in another session? On the plus side, very many providers will be dependent on outsourcing their infrastructure and on using such offers as customers.

Of course, we're not there yet, you're right – we're talking about the requirements of 2020 to 2023, a pure thought experiment.

But we are also talking about infrastructure, data centers, networks and exchanges – ones that need to be planned and built. About protocols and processes that still need to be developed. Is five years really such a long time?

Here again, as an association, we wish to take up this challenge together with our members, we wish to discuss solutions for achieving this goal – true to our motto, "we are shaping the Internet".

Of course, during the year there were again a range of individual topics which should be given a special mention:

#### Surveillance, Reform of the G10 law, Selectors

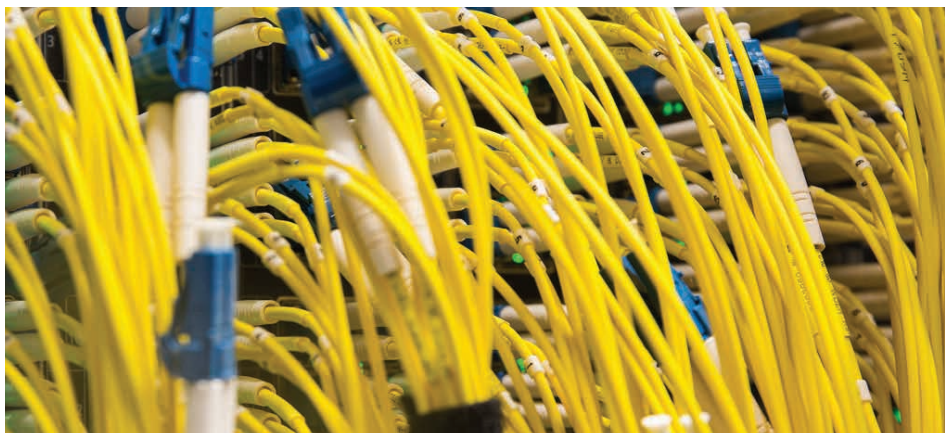
The German NSA Committee of Enquiry, established in the follow-up to the Snowden affair, has arrived in the center of Germany. Something like this could nicely sum up the activi-

ties in the year 2015. Actually the Bundesnachrichtendienst (BND), the German secret service, is being investigated, and the "selector" discussion determined the picture and, as such, the media reporting.

Looking behind the scenes, it deals primarily with the question of how and on whose instigation the collected data can be examined, where the protection of civil rights take effect, to whom it is granted, and above all, how the control of the activities of secret services functions today and who should shape this in the future.

With the exception of the Chancellery and the services themselves, all sides and all parties are in agreement: a reform of the G10 law – stemming from the 1960s – is necessary. It must be adapted to modern communication. But what exact direction this reform should take is a topic of much controversy – from a simple adaptation of controls through to a comprehensive reform, every standpoint is represented.

What is clear is that in such a tense security environment as we face in Europe, the services must have certain rights in order to be able to fulfill their duties. A renunciation of the work of secret services is simply out of the question. But this is also the case analogously for the uncontrolled free hand with a loose interpretation of the legal situation, that we can see secret services have today.



Let's talk about the selector discussion: When the security situation changes every couple of hours, when new search terms and new targets arise, these must be immediately implementable. Here, it shouldn't make a difference whether the names, numbers or addresses originate from your own investigations or are delivered by an NSA, a GCHQ, or some other source – a dynamic administration of the search terms, the "selectors", is essential. Here, a new quality needs to be achieved in the analysis, the automated examination, the check before application, and the checking of results – a kind of "Big Data" for search terms. But this is not so – selectors need in principle to be mandated – in practice an illusion!

We need to reach a point where the search for, for example, a German company or the forwarding of traffic protected by civil rights

to third parties is just as unacceptable as the "inflation" of search terms found by the investigation. The magnitude quickly reached several million, even the figure of ten million entered the discussion – without being able to say, for complex search terms, when exactly and with what purpose these would be used. No, flawed selectors are not acceptable – but the blame for this can hardly be given to the staff, because they are not auditable. A reform that presents clear stipulations would serve well.

Currently we are also dealing with the question of what traffic is actually subject to the protection of civil rights and what is excepted – a discussion which deserves special attention in a "data transit land" like Germany. We must remember that the legal foundation originated in the 1960s, before the establishment of the

EU or the formulation of European human rights law. Protection of civil rights ends for our services, according to the statements in the Committee of Enquiry, at national borders or at the nationality of the target person – on exactly this point, the NSA and the American state has been strongly criticized since 2013.

It is somewhat unpleasant that the first reaction to this debate was a massive expansion of surveillance authority domestically. This is what happened in Germany with the adoption of the new "Law on an improvement of cooperation in the areas of protection of the constitution", which came into effect in November 2015 and massively increased the range of the domestic services, especially in the area of cyber threats. These abstract dangers – including, for example, botnets, DDoS attacks and the tapping of access data – are now placed on an equal level with criminal acts like human trafficking, organized crime, nuclear crime and similar activities, and make possible the surveillance of cable bundles at home and abroad, even in advance of crimes being committed, as "strategic surveillance". In other words, the surveillance of every single cable path of a carrier can be justified with these parameters. Also new is that the insights won through this can be forwarded to law enforcement agencies for preventative measures.

The national revision of blanket data retention, which came into effect in December 2015 as the "Law for the Introduction of an Obligation to Retain Traffic Data and Maximum Retention Time Limits" and regulates access for services and law enforcement, represents a further critical measure in this catalog.

Regardless of where you stand on surveillance, those who suffer are, as expected, the companies which are required to implement a massive catalog of security requirements for the introduction of this retention, and they have to do this at their own cost. First, the costs are prohibitively high and can only be assessed as a market entry barrier, as no exceptions or criteria relating to size are included. Through the already pending legal cases against this law, which may in the end lead to examination by the ECJ, the companies can place bets as to whether implementation will actually be required this time, or whether a new round of investment will be necessary to perform its immediate decommissioning.

### Internet Security

IT security by law – now we've got it in a twin-pack; firstly the German IT Security Act and the associated provisions, and also the NIS Directive. Large portions of the industry are not affected. The act is directed exclusively at "critical infrastructures" – those that are relevant for the provision of the population, and it includes an exclusion for all companies

regulated by the German Telecommunications Act (TKG) – these are, according to the Federal Ministry for the Interior, at most "positively affected".

Currently, the industry is working in cooperation with the German Federal Office of the Security of Information Technology (BSI) on "industry standards" that would apply to the "critical" parts of data centers, DNS servers, hosters, and similar services. The reporting channels and reporting criteria are being agreed on, the SPOCs are being established for each industry – ICT as a whole falls into the so-called "first basket", and as a result is part of the first implementation round. From May 2016, implementation will begin on the "second basket", which will affect further sectors.

Whether the urgently needed increase in essential IT security can actually be brought about in this way is yet to be seen. However, the hacks and data leakages made public in 2015 show that such a fundamental increase in IT security is urgently needed. Unfortunately, this is also the case for networks and TC services: partly through hacks and partly through DDoS and similar attacks, many services suffered temporary outages in the past year – some very short-term, and some lasting several days.

However, the role of the TC network operator goes somewhat further: through the expanded regulations of the TKG, all providers, regardless

of size, fall under the specifications which correspond to a critical operator, even though only few of the companies would be defined as "critical". However, it is now additionally required for all operators to monitor incidents that they become aware of in their customers' systems, and themselves to report information gained through this – a complex task that will be difficult to fulfil.

### Data protection, Safe Harbor and Privacy Shield

From one minute to the next it happened, virtually without any warning – on 6 October, the ECJ overturned the Safe Harbor Agreement between the EU Commission and the USA. Practically without any transition period, data transfers between the EU and the USA for hundreds of companies were virtually without legal foundation and violated the data protection regulations. The justification is also of interest: one of the main arguments is the access of authorities and law enforcement agencies to the stored data, access which is legally regulated in the USA and unavoidable for companies, and has little to do with the actual behavior or the policies of the individual companies.

As a result, fall was colored by the debate about a successor regulation, and about the possibilities of alternative formulations of contracts – or even about the offers themselves. What is interesting is that, in fact, in many

places solutions were created to migrate data storage to Europe. Often, offers were developed for customers to use alternative locations within Europe. With regards to the applicability, the different attitudes to the question of whose data is actually being processed – a question to which contrasting answers were found on different sides of the Atlantic – play a not to be underestimated role, as the rights to one's own personal data have been relatively strongly cemented in the EU since 2014.

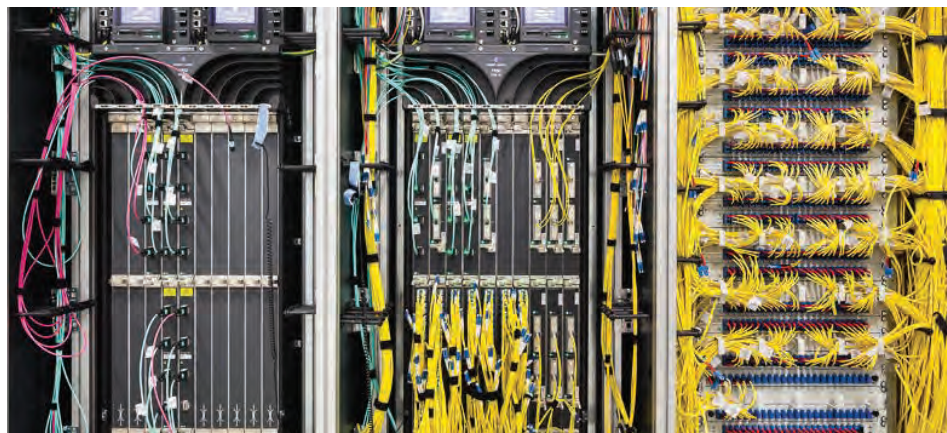
Whether anything in this overall situation will change in the planned new regulation, the EU-US Privacy Shield, seems questionable – despite the assurances from the US side, which are, unfortunately, rather soft. The "Article 29 Working Party", the meeting of EU Data Privacy Officers, has already announced the need for improvements. Max Schrems, the complainant of the first ECJ ruling against Safe Harbor, summarized the attempts to create the Privacy Shield as following: "They put ten layers of lipstick on a pig, but I doubt the court and the DPAs suddenly want to cuddle with it." Through the adoption of the new EU Data Protection Directive in April 2016, this topic will gain in new relevance for European companies, as many regulations – among others, for commercial data processing – need to be revised before the new directive takes effect in 2018, even within the EU.

## WLAN

An ongoing topic over the years has been the new regulation on Wi-Fi third-party liability ("Störerhaftung"), or, in other words, changes to the Telemedia Act. Triggered by the wish of many communes, authorities, tourism associations and, last but not least, retailers and business people to finally be able to offer the – in international comparison – normal Wi-Fi access in public or semi-public areas in Germany, a proposal for an amendment was put forward by the German Federal Ministry of Economic Affairs and Energy (BMWi).

Unfortunately, it quickly became clear that offering public Wi-Fi in cities, municipalities, government offices, yes, even the federal and state parliaments and the ministries – not to even mention companies, shopping malls, trade fairs, conferences etc. – would not be possible with this proposal. The target objective of the regulation had therefore explicitly not been reached. Along with this, further regulations on the liability of hosting providers had been included which, in eco's eyes, were not even compliant with EU law.

As an association, eco took a central role in the subsequent discussion. Experts were dispatched to the Federal Parliament, to the factions, and the state working groups. It soon became apparent that the planned regulation was neither technically nor legally tenable, and was far from real world practicalities.



eco's recommendation was clear: if it is not possible to unambiguously clarify the liability regime, then the former regulation should remain in place. For this, there had at least been years of work establishing case law, which is certainly preferable to years of new legal uncertainty. As a result of the discussion, the proposal was withdrawn. Currently, the attitude seems to be that a clear liability regime would make sense.

Unfortunately, it seems that the change of heart is probably based on a "revised technical regulation" from the Bundesnetzagentur (Federal Network Agency) which affects our members directly: during 2015, providers were informed that implementation of surveillance measures in principle also apply, effective immediately, to hotspot systems for nomadic identification, and in addition this could apply

to MAC addresses as identification. As this was not a formal process, there was no possibility to make objections.

## Net Neutrality

Net neutrality has been one of the big topics in the past year, triggered by the new regulation from the Federal Communications Commission (FCC) in the USA in February and the compromise negotiated between the Council and Parliament in the context of the EU trialog negotiations in fall 2015. What is clear today is that special services continue to be permissible when realized separately, but preferential treatment of services within the Internet channel is only possible under very strict constraints.

The newly devised regulations on net neutrality are really to nobody's taste – the definitions are too vague, and there remains too much room for interpretation and scope for national design. A concrete set of guidelines, a kind of "how to" document, is expected from BEREC (Body of European Regulators for Electronic Communications) no earlier than the middle of 2016.

That may be helpful for our companies in the long term, but it comes in the first place at the cost of legal certainty. It is quite possible that an exact interpretation will only be found by taking legal action. A prohibition of certain services by the respective regulatory authorities – through the presence of assumed offences – is conceivable.

## Broadband and network access

Again an ever-present issue in this board topic was the topic of broadband – driven both by the discussion of the revenue from the frequency auctions and the resulting unprecedented availability of an investment fund running into the billions, as well as by the continuing discussion on the regulation of vectoring at the main distributor. However, it is unfortunately becoming obvious that our economy is not catching up when it comes to broadband, but is falling further and further behind. The lack of a clear commitment to a consistent fiber-optic expansion has led to the unpleasant situation that we will neither achieve our expansion objective of 50 Mbit/s

for all by 2018, nor have we a significant portion of fiber-optic connections to date. And it seems somewhat strange that the ministry responsible is currently putting the finishing touches on a study into the need for 1 GBit/s broadband connections for companies, when in large parts of the world the existing 1 GBit/s FTTH networks are being upgraded to 10 GBit/s FTTH networks – and it should be understood that this is supply for the end customer. In Europe as well, several states have achieved a coverage of 50 percent or more for FTTH – a head-start that Germany can hardly catch up on. But when, even in times of extremely low interest rates, no convincing concepts can be found either in politics or in the industry for the last ten to 20 percent of households in the technology mix, and no investors can be found for a significant fiber-optic expansion program, then how could we, ten years ago – in times of “normal” interest rates – speculate about an expansion, and how could we estimate the costs? What is clear is that the focus on profitability of large infrastructural projects should have massively shifted in the direction of feasibility. An impact on expansion activities is, however, yet to be seen.

#### DE-CIX Management GmbH, DE-CIX International AG and subsidiaries

“Others talk about it – we do it” could be the motto of the DE-CIX business division. The explosion in world-wide data transport hits home so powerfully in almost no other area as

it does in the largest Internet exchange point in the world, operated by us in Frankfurt am Main. While the number of participants grew at a “normal rate” from 600 to around 650, the connected capacity of those participants simply exploded – from around 10 TBit/s to almost 20 TBit/s. The peak throughput grew in just one year from around 3.5 to 5 TBit/s – enormous growth, resulting from the massive increase in video services and other multimedia content. Despite the price reduction for the participants, turnover increased from around EUR 23 million to approx. EUR 25 million. A great success!

DE-CIX expanded its presence in both the national and international market. In the meantime, a total of eleven exchange points are now in operation, and of these, four are in Germany and seven are in the international environment. What is new is in particular the presence in the Mediterranean region, with four hubs, which also demonstrates one new strategy: the establishment of peering points at the hubs of cable systems and thus not in the center of national digital markets.

Further details of the extensive activities relating to the exchange points can, as always, be found in the chapter “DE-CIX”. Information on the activities of the relevant Competence Groups for this board, like Data Center, Email, IPTV, VoIP, IPv6, Names & Numbers and New Work, can be found in the reports of the individual Competence Groups.





*Roland Broch*  
*Coordinator Data Center Expert Group*



*Dr. Béla Waldhauser*  
*Leader of the Competence Group Data Center  
Infrastructure*

## 4.2 Reports from the Competence Groups

eco offers events and publishes articles and position papers in both English and German. Please note that the titles of events and publications which were originally only in German have been translated into English in the following reports for ease of reading.

### 4.2.1 Datacenter Expert Group

#### **Standardization and consolidation in the context of a European data center market**

In its anniversary year, the 20-year birthday of the eco Association, the Data Center Expert Group was able to look back at numerous and various events with a broad range of topics.

The representatives of the individual competence groups within the expert group attended almost 20 events in person in 2015. In addition to international meetings and events in Dublin, Monaco, and Paris, Association representatives were present in Berlin, Cologne, Frankfurt, Freiburg, Heidelberg, Kiel, Rust and Walldorf.

The year started with the ecoTrialog #18 and 56 data center experts on 27 and 28 January under the motto "Design thinking for the data center industry," hosted by SAP in Walldorf and Heidelberg.

Around 80 IT and DC experts from five countries met in the Irish capital Dublin for the ecoTrialog #19 from 4 to 6 March, visited the CommScope cable plant and the Digital Realty data center, and enjoyed the 24 talks and presentations.

Between the 24 and 26 March, over 6,000 web hosting experts from all over the world had the chance to meet eco representatives in the conference and exhibition at the Word Hosting

Days in Rust. Dr. Béla Waldhauser, Leader of the Competence Group Data Center Infrastructure, moderated the panel discussion „Benchmarking data center energy efficiency and performance" on 26 March.



Marc Wilkens  
Leader of the Competence Group Data Center Efficiency



Under the heading "Fit for the normed data center", 30 participants joined the Competence Group Leader Marc Wilkens' kick-off event for the EN 50600 in the DE-CIX MeetingCenter in Frankfurt am Main. 25 guests joined moderator and initiator Stefan Meier of PRIOR1 for the "RechenZentrumsDialog" (Data Center Dialog) on 15 April in the eco's Cologne office. Another almost 30 data center experts took part in the „Datacenter Experience 2015" in eco's Berlin office on 5 May.

Several representatives of the Data Center Expert Group were at the eco stand at the Datacloud Europe 2015 fair in Monaco on 3 and 4 June to answer questions from conference attendees from the data center and telecommunication industries from all over Europe. An international jury headed by Gerd J. Simon presented the eco and DE-CIX CEO Harald A.

Summa with the "Award for Lifetime Achievement" on 2 June, on the eve of the industry forum.

Dr. Béla Waldhauser spoke with moderator Ben Kasselmann in "Auf der Suche nach eco" (Looking for eco), a series of videos on the occasion of the 20-year anniversary. The second round of the "RechenZentrumsDialog" (Data Center Dialog) took place 9 June in the DE-CIX MeetingCenter in Frankfurt am Main with four speakers, moderator Stefan Meier and almost 20 attendees.

The 32 experts from various fields of the Internet industry joined the meeting organized by a number of the eco Competence Groups on 22 and 23 June at the Kiel Week sailing festival on the German coast. A whirlwind tour through German IT and business culture took

place on 24 and 25 June, just before the eco Gala. The new event format, „econnect on Tour", initiated and organized by Judith Ellis, International Member Services at eco, took 22 IT executives from six European countries on a series of visits to local IT companies, with talks and panels discussion aimed at introducing the IT market in Germany.

The Competence Groups Law and Regulations, Data Center and Security jointly hosted a discussion on Housing, Hosting, and IT Security on 10 September in the eco Kubus. Dr. Michael Pilgermann represented the German Federal Ministry of the Interior in the discussion on the IT Security Act. The 3rd German Data Center Day, focusing on "Data Center Strategy 4.0", was attended by over 30 data center experts on 17 September in Freiburg.

A three-part update workshop on EN 50600 explored the new data center norm on 16 October, 20 November, and 15 December in Frankfurt, Berlin, and Cologne respectively.

At the DATA CENTRE WORLD conference in Frankfurt on 10 and 11 November, the Data Center Expert group contributed seven podium discussions and short presentations on the key topics "Energy Efficiency, Cost Management and DCIM" and "Advances in Critical Equipment and Facilities Management".

A meeting of European ISP associations in Paris on 25 November debated the challenges that the European Single Market presents data center operators. In the lead-up to the meeting, eco was one of the European industry associations that started a survey on the development of European data centers with



the aim of identifying and prioritizing data center issues on domestic and EU levels.

In addition to the numerous events organized and attended, the eco Data Center Expert Group also started the interview series "5 questions for..." with known personalities from the data center scene. Interviews with 29 experts in 2015 can be found on the eco website and the interview series will continue in 2016.

### Data Center Star Audit

Data Center Star Audit, started in 2006, is an independent evaluation instrument for the availability, security and redundancy of data centers. In 2015, eco awarded the quality seal to nine data center locations in Germany and Austria; one location with three stars, seven locations with four stars and one with five stars. Two locations were awarded an additional green star for energy efficiency.

<https://datacenter.eco.de>  
[www.dcaudit.com](http://www.dcaudit.com)





*Prof. Dr. Georg Rainer Hofmann  
Leader of the Competence Group E-Commerce*

*Lars Steffen  
Member Services*

## 4.2.2 Competence Group E-Commerce

The eco Competence Group E-Commerce, headed by Prof. Georg Rainer, explored a variety of topics related to doing business online in events throughout the country. On 16 March in Berlin, the first event of the year looked at certification and regulation and the options to act within a liberal, legal and safe business environment.

The Best-in-eCommerce Awards, held as part of the tools 2015 on 17 June in Berlin, were given to the best eCommerce stories in Germany. Prof. Rainer was one of the jurors and gave a keynote speech on "new eCommerce – current important phenomena and explanations."

The first event in cooperation with the eco Competence Group Online Marketing, headed by Dr. Torsten Schwarz, on 6 July in the Classic Remise in Düsseldorf, focused on "Fit for e-Commerce – How to be Successful with Online Marketing" and was hosted by argutus.

The E-Payment working group met on 10 July and 17 September and discussed "ZUGFeRD", a specification for the format of electronic invoices, developed by associations, ministries and companies in Germany. In September and November, Prof. Georg Rainer Hofmann gave talks at the ZUGFeRD Developer Days in Bielefeld. He also represented eco at the 2nd

ZUGFeRD Conference in Berlin on 5 and 6 November.

The Competence Group E-Commerce met again on 28 September in Cologne to explore how independent retailers can position themselves online. The last event of the year took place during the Cologne Internet Week. The Competence Group met on 23 October as part of the conference startupcom and looked "Start-Ups in e-Commerce."





*André Görmer*

*Leader of the Competence Group E-Mail*

*Sven Krohla*

*Leader of the Competence Group E-Mail*

## 4.2.3 Competence Group E-Mail

The eco Competence Group E-Mail is a fixed component of the German Internet industry with regard to the development of common standards for the sending and receiving of emails. In the group, technical problems of all kinds are solved via short chains of command, and new developments are discussed.

The Competence Group E-Mail is a closed group, because email traffic is particularly in need of protection and the participants need to speak openly about their systems in order to find solutions to new challenges. All ISPs that are members of eco can participate in the group. In addition, further qualified partici-

pants can be invited to contribute. In this way, guest presentations from Google, the German Federal Office for Information Security (BSI) and sys4 AG enriched the three meetings in 2015, with an average of 30 attendees, with their content.

The group is led by acknowledged experts: André Görmer (Teradata) represents the senders (ESPs), Sven Krohla (1&1 MailSecurity) the ISPs. The reduction of Phishing was again a major topic for the group in 2015. The content of a legal opinion on Domain-based Message Authentication Reporting and Conformance (DMARC) according to German law was published and presented at a meeting of the international Messaging Mobile Malware Anti-

Abuse Working Group (M3AAWG) in Dublin. The revelations from Edward Snowden with regard to the surveillance methods particularly of the NSA continue to trigger discussions about increased security standards to protect the privacy and integrity of email communication. Alongside familiar topics such as TLS, DANE and solutions for secure end-to-end encryption, the debate was supported by the drafts for a technical regulation of the BSI for the certification of secure email providers and SMTP Strict Transport Security.

In addition to the purely technical topics, the members of the group discussed abuse scenarios in the field of email and the latest market challenge, Universal Acceptance.

The organizational restructuring of the Competence Group in the previous year already showed first results. The working group on the selection of DNS-based Blacklists (DNSBLs) published their Best Practice document, which was taken up positively by the press.

In 2016, the Competence Group expects the finalization of the document on Best Practices for the configuration of DomainKeys Identified Mail (DKIM) and a legal opinion on "The Require-Recipient-Valid-Since Header Field and SMTP Service Extension" (RRVS).

Further information at:  
<https://e-mail.eco.de>



*Ibrahim Mazari*  
*Leader of the Competence Group Games*



*Michael Westphal*  
*Leader of the Competence Group Streaming Media*



*Lars Steffen*  
*Business Development Member Development*

### 4.2.4 Competence Group Games/Streaming Media

The Competence Group Games started the year by announcing the closer cooperation with the GAME National Association of the Gaming Industry. With its 100 members, GAME is the largest industry association of the German games industry, which makes them an ideal partner for the eco Competence Group. The two organizations have worked closely together for years and are members in each other's associations. Joint events, member services and content work are planned.

The first in 2015 was the Serious Games Conference on 19 March, during the CeBIT fair in Hanover, with a focus on Applied Interactive Technologies. The „econnect“ whirlwind tour through German IT and business culture on

24 and 25 June included a visit to Turtle Entertainment with ESL One Games, the world leader in e-sports and online gaming events.

In a press release at the end of June, and in the run up to gamescon 2015, Ibrahim Mazari, Leader of the eco Competence Group Games spoke about the rise of gamification or game-based learning. From 5 to 9 August, gamescon 2015 took place in Cologne. It is the largest fair for interactive electronic entertainment and video and computer games, with visitors from 96 countries. Dorothea Wohn and Lars Steffen from eco Member Services represented eco at the stand, which was shared with the GAME association. eco and GAME were

also partners for the PWC full-day workshop on "Doing Digital Business" on 7 August.

eco's Berlin office hosted a very special event on 19 October; the "Epic Games Unreal Engine 4 Workshop." The booked-out evening event demonstrated what the unreal engine can do. Another press release highlighted the role of the gaming industry as a driver for innovation for the digital economy. It is an industry that is often looked down on by "serious IT", but eco believes the gaming industry will take the lead in hardware and software user concepts and in shaping how the Internet is used. The last press release of the year kicked off the eco 2016 Hot Topic "Entertainment" and explored the relationship between gaming and hosting.

Further information:  
<https://games.eco.de>



## Streaming Media

The eco Competence Group Streaming Media started the year's activities with a press release on how streaming and co. will take over classical TV by 2020. Between 15 and 18 April, the eco Competence Group Leader, Michael Westphal, published a series of video interviews on the usage and potential of drones, while he was attending the AERO Expo in Friedrichshafen. The aviation fair had 645 exhibitors from 38 countries and over 30,000 visitors. It was clear that drones are becoming more and more important, and affordable, for the production of visuals, and therefore also for online content.

A second series of video interviews under the motto "Where Broadband meets Content" presented personalities from the broadband and

content fields during the ANGA COM trade fair from 9 to 11 June. Michael Westphal and Lars Steffen of eco Member Services, conducted the interviews and also manned eco's stand in the partner lounge at the trade fair for broadband, cable and satellite.

At the end of June, „econnect on Tour“, initiated and organized by Judith Ellis, International Member Services at eco, took 22 IT executives from six European countries on a series of visits to local IT companies with talks and panel discussions aimed at introducing the IT market in Germany. The tour included a visit to the nobeo TV studios in Hürth, just outside of Cologne. nobeo's @car, one of the broadcasting vans, was used for the live streaming of the eco Gala at the end of the tour and the participants received a unique insight into the complexities of producing live broadcasts, the

challenges of data storage and processing, and the pros and cons of IP-based broadcasting.

Michael Westphal and Lars Steffen represented the eco Competence Group Streaming Media at a stand at the Lokalrundfunktagen 2015, a local and regional radio fair with around 1,200 participants, in Nuremberg.

In November, the group wrapped up the year's activities with a further press release, this time with a warning that the continually increasing use of streaming is also an increasing challenge for the infrastructure of the Internet.

Further information:

<https://streaming-media.eco.de>



*Dr. Bettina Horster*  
*Director Mobile,*  
*Leader of the Competence Group Mobile*

*Peter Koller*  
*E-Business*



## 4.2.5 Competence Group Mobile

The eco Competence Group Mobile continued its successful work in 2015. The focus of activities was in the areas Industry 4.0 (cyber-physical systems) and Machine to Machine Communication (M2M).

The Deutsche Messe, the M2M Alliance e.V., and the eco Competence Group Mobile took over 30 participants on a guided tour of the Hannover Fair under the motto "Integrated Industry – Join the Network!" on 14 April, the group's first event in 2015. Next up was the 8th Mobile Business Trends event at McKinsey's Düsseldorf office. Over 100 people attended the event, which was held in cooperation with the Düsseldorf Chamber of Commerce, under the motto "Industry 4.0: A competitive advantage or just too much for companies – MADE in NRW?"

At the Internet Security Days on 17 September, the Competence Group Mobile showed the dangers posed by Smart meters, home automation and fitness trackers in the track on quantifying humans.

At the M2M Future Trends 2015 on 12 November, the group discussed whether Germany will make the jump to No. 1 among the Industry 4.0 locations or whether it is at risk of deindustrializing. One of the keynote speakers was Garrelt Duin, the Finance Minister of the federal state of North Rhine-Westphalia.

In addition to the very successful events, a number of press releases were published as well as a legal guide to M2M in cooperation with PwC Legal and the Juconomy law firm.

Further information:  
<https://mobile.eco.de>



*Thomas Rickert, Attorney-at-Law  
Director Names & Numbers, Leader of the Competence  
Group Names & Numbers Forum*

*Lars Steffen  
Member Services*

## 4.2.6 Competence Group Names & Numbers Forum

In 2015, the eco Competence Group Names & Numbers Forum again focused on the new generic Top-Level Domains (new gTLDs) of the Internet Corporation for Assigned Names & Numbers (ICANN), which have made more choice and competition in the domain market possible since the end of 2013.

A new service was launched by the Competence Group parallel to the industry conference Domain pulse 2015 on 25 February. Under <https://numbers.eco.de/gtlds-figures-trends.html>, up-to-date market insights into domain activity related to generic Top-Level-Domains (gTLDs) are constantly updated and presented in a series of charts. It is the first service of its kind in Germany, or indeed Europe, according to

Thomas Rickert, Leader and Director of the eco Names & Numbers Forum.

The annual meeting of the German-speaking country registries DENIC, nic.at and SWITCH took place at the Domain pulse 2015 event in Berlin on 26 and 27 February. It was a good mix of talks and podium discussions with high-level speakers on the topics of Internet Governance, new Top Level Domains and IT security. The first day focused on the new gTLDs with a panel discussion on "Promises – kept? New gTLDs and the revolution of the Internet". On the second day, the focus turned to Internet governance and the IANA Stewardship Transition.

A month later, the Names & Numbers Forum was present at WHD.global 2015 in Rust, the world's largest hosting and cloud event, with more than 6,000 visitors annually. Thomas Rickert headed a panel discussion on "New TLDs – 3.5 million names to 20 million in 2015?", after which all concluded that the new TLDs will indeed establish themselves, just not as quickly as expected.

In September, the eco and Names & Numbers Forum were present at the solutions.Hamburg 2015 conference with a stand. Oliver Süme and Lars Steffen gave a presentation on the advantages of geographical Top Level Domains for regional marketing.

The Competence Group attended HostingCon Europe 2015 in Amsterdam, also in September. Ivo Ivanov, Head of Professional Services, and Judith Ellis and Lars Steffen of Member Services, represented eco in a series of panels with ICANN, i2 Coalition and Open-Xchange on the topics "A Critical Year for Internet Governance Development" and "How Long is the Long Arm of Interception Law."

Lars Steffen attended the 54th CENTR General Assembly in Brussels on 7 October on behalf of the Names & Numbers Forum. eco members CIRA and nic.at received CENTR awards at the festive ceremony concluding the event.



#### ICANN & IANA Stewardship Transition

Who will take on the supervision of the Internet Assigned Numbers Authority (IANA) from September 2015? This question dominated all international discussions on the topic of Internet governance and was also the central issue dealt with at the ICANN meetings.

The 52nd ICANN Meeting took place in Singapore in February and eco used the platform to consult on national guidelines and recommendations on transferring the supervision of the IANA functions. The aim was to bring the German position into the international negotiations. On 8 February eco and DENIC eG hosted the German Evening as a kick-off event for the ICANN Conference.

At the 53rd ICANN Meeting in Buenos Aires in June, the discussion was again all about the IANA Stewardship Transition. In the meantime, eco had prepared a position paper with the German Federal Government and other German stakeholders and was successful in bringing this into the global discussion process.

After the CCWG Accountability requested the Community to comment on the draft proposal in August and September, a final draft for the future of Internet governance was ready for the 54th ICANN Meeting from 18 to 22 October in Dublin. The topic of ICANN Accountability was the central point of discussion.

To wrap up the year of events on the IANA Stewardship transition, the Berlin office focused the fifth round of "Schoko & Sushi", on 20 November, on how the Internet works globally and why root servers are so important, why the US governs the Internet and whether this will change soon, and how ICANN will develop in the future.

Throughout the year, Thomas Rickert gave regular reports on the current status of the CCWG Accountability in several webinars.

Further information:  
<https://numbers.eco.de>



*Sebastian Abt*

*Leader of the Competence Group Infrastructure Security*

*Cornelia Schildt*

*Project Manager IT Security*

## 4.2.7 Expert Group Networks/Competence Group Infrastructure Security

The topic of infrastructure security was the focal point of the work of the Expert Group Networks in 2015. Under the leadership of Sebastian Abt, the group discussed with member companies how network infrastructure and therefore the heart of the Internet can be better protected. The first event on 19 February in Cologne centered on dealing with security incidents.

During the Internet Security Days, the Expert Group Networks held a Security Session on 17 September on the topic of physical security, something that is as important for IT components and data centers as firewalls. The Competence Group Infrastructure Security again focused on DDoS, which is considered to be one of the greatest threats on a network level.

Further information:  
<https://de-cix.eco.de>





Lucia Falkenberg  
Leader of the Competence Group New Work



Natalie Haller  
Assistant Member Services



Dorothea Wohn  
Assistant Member Services

## 4.2.8 Competence Group New Work

### Truly beautiful employers in the Competence Group New Work

Thanks to the digitalization of work, we are currently experiencing a sea change in working culture. This will lead to more economic success, quality of life and more equality – if the conditions are right and the shaping of this new work environment is accepted as a challenge. In order to find and keep new talents, companies need to consider various factors so they can stay competitive and attractive as employers.

The first meeting of the Competence Group New Work took place on 16 June in Cologne under the motto "Employer Branding – True Beauty is on the inside". The main topic under discussion was about why good leadership is so important in the workplace 4.0. The Competence Group developed a recipe for successful employer branding: A pinch of authenticity mixed with the voices of colleagues and seasoned with a good portion of self-reflection.

A week later, the first Internet Award in the category of New Work was presented to the company ArbeitgeberGold at the eco Gala in Cologne. The next meeting of the Competence Group New Work was during the sixth Cologne Internet Week on 22 October in a co-working space in Cologne. The topic was "Seek and you shall find", with reports from five young experts on practice-oriented recruiting alternatives.

Further information  
<https://new-work.eco.de>



*Dr. Torsten Schwarz*

*Leader of the Competence Group Online Marketing*

*Lars Steffen*

*Member Services*



## 4.2.9 Competence Group Online Marketing

The fifth e-marketingday Rheinland took place in Düsseldorf: "Online marketing in a nutshell". Markus Schraffin, Head of Member Services, moderated the full day of discussions and presentations on how lots of customers and turnover can be found online, but that companies need to keep up with quickly-changing technologies and must always be up-to-date in terms of online marketing for it to be effective.

The Competence Group Online Marketing also joined the CSA Customer Summit on 23 April in Cologne. Dr. Torsten Schwarz, Leader of the eco Competence Group, was one of the keynote speakers and spoke about how important deliverability is for the future of direct marketing. The long-time eco member ABAKUS Internet

Marketing hosted the 2015 ABAKUS SEO Roadshow on 27 April in the DE-CIX MeetingCenter in Frankfurt. eco was proud to be partner for the content-filled roadshow all about search engine optimization, current criteria, their impact, and how to use them successfully.

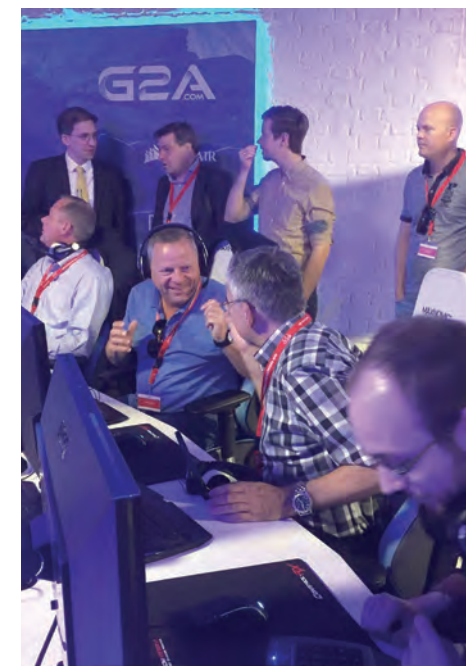
In July, the first event held in cooperation with the eco Competence Group E-Commerce, led by Prof. Georg Rainer Hofmann, took place in Düsseldorf: "Fit for e-Commerce – How to be Successful with Online Marketing". After the summer break, eco hosted a further seminar on 24 September on the topics of e-commerce and online marketing organized by ePages, an eco member company: "Do online business better", aimed at helping e-commerce begin-

ners to get more out of their online shops. Three more joint events in 2016 are planned by the two Competence Groups.

After the success of the first meeting of online marketers in 2014, Dr. Torsten Schwarz and the Competence Group organized another informal opportunity to exchange ideas and experience under the motto "Introducing Email Marketing in Companies" on 23 November.

Further information

<https://online-marketing.eco.de>





*Henning Lesch, Attorney-at-Law  
Head of Law and Regulations*

*Folke Scheffel  
Solicitor Internet and Media Law*

*Elisabeth Sift  
Solicitor IT Law*

### 4.2.10 Competence Group Law and Regulations

The Competence Group Law and Regulations is the central discussion and information platform for eco member companies. This is where agreement on the content of the work is reached, positions are prepared, queries regarding legal and regulatory topics are answered and the general positioning of eco on the relevant Internet and network policy topics and issues is discussed. In this way, members have the opportunity to actively influence the legislative process at the state, federal and European level, and as such to participate in the shaping of legal policy.

In the eco Competence Group Law and Regulations, there were many points of contact in the political and regulatory areas in the reporting

year. The meetings of the Competence Group were used in order to provide a perspective and an overview of current policy topics and legislative initiatives and to discuss these with members.

In 2015, the Competence Group concentrated on three legislative processes: The reintroduction of blanket data retention; the reform of the Telemedia Act for the abolishment of Wi-Fi third-party liability; and the further implementation of the IT Security law.

The much-debated IT Security Law came into force on 25 July. In a meeting of the Competence Group Law and Regulations, Dr. Michael Pilgermann, a representative of the Federal Ministry of the Interior (BMI), explained and discussed the thoughts and steps taken by the Ministry on a legal framework for the imple-

mentation of the IT Security Law in the information and communication industry.

The group closely followed the discussion on net neutrality on a national and European level triggered by the US regulatory authority FCC's passing of a new legal framework for the regulation of the Internet on 26 February. In discussions with member companies, the Competence Group explored the significance of the FCC's decision and its possible impact on and consequences for Germany and Europe.

Another meeting concentrated on the planned changes to the Telemedia Act. The worries of the Internet industry about such proposed changes as increased liability for hosting providers were presented to the government by eco and addressed during the drafting and parliamentary processes.

Throughout the year, the political deliberations on reintroduction of blanket data retention in Germany were closely watched. In particular, the question of whether there would be a European initiative for a new directive was debated. Further topics in 2015 were the Joint Federal Government and Federal State Commission on the Reform of the Media Law, the reform of the film funding law, and the consultations on the youth media protection treaty.

Topics of particular interest on a European level were the reform of copyright law, the legislative process for a European data protection directive, the consultation on the legal framework for telecommunication, and the directive on audiovisual media services.

Further information  
<https://recht.eco.de>



Foto: ©antispameurope



Oliver Dehning  
Leader of the Competence Group Security

Cornelia Schildt  
Project Manager IT Security

Peter Meyer  
Project Manager ACDC

## 4.2.11 Competence Group Security

The eco Competence Group Security explores all issues related to the security of IT infrastructure of the Internet industry. Topics range from personal and organizational security to the protection of IT systems (servers, networks), the security of mobile communication technology (tablets, smartphones, Wi-Fi), and issues of security management and staff awareness.

The first meeting of the year, on 25 February, debated whether yesterday's methods could manage the threats beyond tomorrow. The participants and invited security experts discussed what protection measures can be taken against new types of cyber-attacks, what concepts need to be totally revamped and whether the new challenges have even been fully understood.

The event series "Whose fault is data loss?" continued with two events in January in Frankfurt and another in April in Munich. Around 40 professionals joined eco and TÜV Rheinland for each event and learned about white-collar crime in Germany and how companies can protect themselves against data theft and IT risks.

A new addition to the well-established Internet Security Days in September was the new event series Internet Security Evening under the motto "3 Topics – 3 Cities – 3 Evenings". The first event was in May in Frankfurt with the topic Cloud Security. In June, the participants discussed the new IT Security Law in Berlin on the evening before the law was passed. The third and last event took place in July in Munich and explored the topic of Mobile Security.

During the Internet Security Days, the Competence Group Security hosted a Security Session on 16 September on the topic of Connected World, delving into the security challenges of the Internet of Things. That security experts and engineers need to work more closely together was the conclusion of the podium discussion at the end of the day.

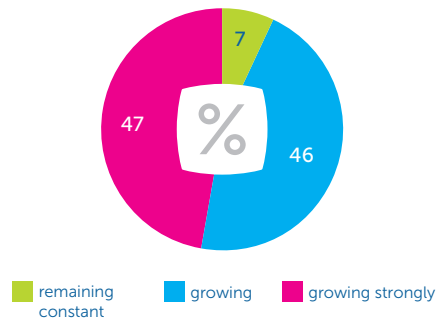
**Survey on Internet Security 2016 – the eco Security Report 2016: Awareness is growing with the risks**

**Fewer actual incidents than feared – the real number of incidents is unknown**

At the end of the year, the eco Competence Group Security carried out the 7th annual survey of security expectations for the following year. The threat level in IT security is rising – this is the assessment of the majority of German companies surveyed in the eco Security Report 2015. 580 companies responded to eco's survey.

47 percent perceived the threat situation to be "growing strongly", while 46 percent responded

### Threat Situation is Perceived as Growing



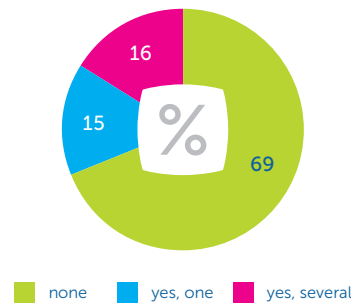
with "growing". 7 percent believe the threat situation is "remaining constant." None of the companies questioned thought the threat situation had eased off.

Among the key outcomes was the finding that providers perceive the threat to be greater than users do. Expenditure on IT security and levels of outsourcing are increasing. The three most important issues in 2016 for IT security are data protection, raising awareness among staff members, and encryption. Snowden and the NSA have had a big impact on how important encrypted communication is considered.

### Abuse Team meetings

The Competence Group Abuse was reactivated at the end of 2015. Around 30 participants

### Significant Incidents in Recent Years



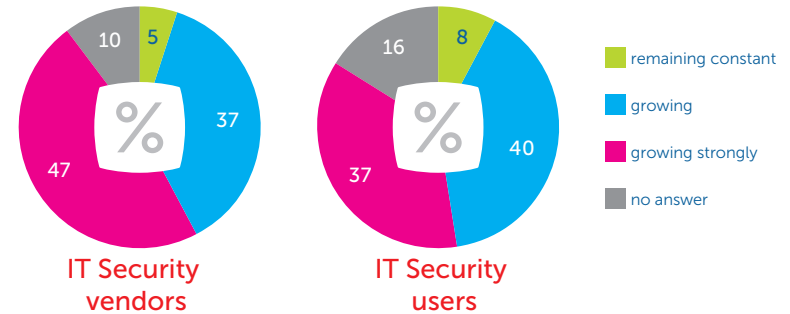
from the anti-abuse departments of German Internet service and hosting providers attended. The group plans on meeting three times a year and organizing events with a balance between current anti-abuse topics and input from external experts. The existing mailing list was reactivated and updated. It is to be used to allow anti-abuse departments to quickly discuss and seek solutions for current abuse incidents and trends.

Contact: [peter.meyer@eco.de](mailto:peter.meyer@eco.de)

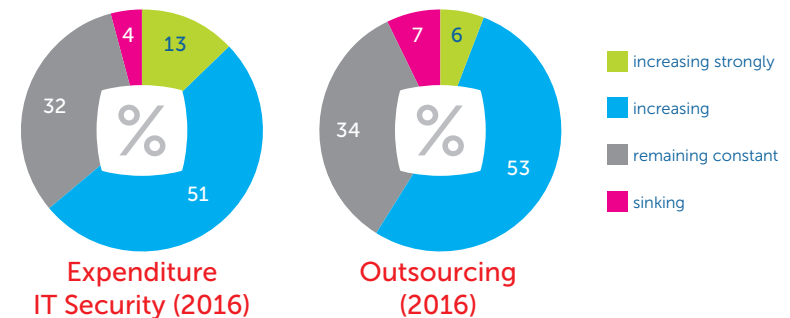
Further information:

<https://sicherheit.eco.de>

### Threat Situation According to Vendors/Users Vendors assess the situation as more threatening than users



### Expenses and Outsourcing Expenses and outsourcing both increasing





Arzu Uyan  
Leader of the Competence Group Smart Environment



## 4.2.12 Competence Group Smart Environment

As the Internet of Things has gained steadily in importance in recent years, eco has established the new Competence Group Smart Environment in addition to the Competence Group Mobile in order to explore the topic more intensely. The new Competence Group was founded on 1 May and is led by Arzu Uyan.

The official launch was on 10 June with a kick-off during the Interactive Cologne congress. A variety of experts examined the topic of Smart, from software, hardware and business perspectives, with over 100 participants.

During the Cologne Internet Week in October, Arzu Uyan greeted the more than 20 participants and three speakers from YouGov, Microsoft and Excel Secure Solutions to the event "The Digital 6th Sense". At the event, Sonja Laude of YouGov presented the YouGov study "Internet of Things", which was created in cooperation with eco.

At the Viscom fair for visual communication, Arzu Uyan gave a talk on "The world after mobile: What comes after the mobile phone? And how much future is here already?" to more than 50 visitors.

The youngest Competence Group is featured in the eco Hot Topic Smart World in 2016. The Internet of Things and smart applications are constantly developing and the group will track and explore these advances from different perspectives.

Further information:  
<https://smart.eco.de>



Detlev Artelt

Leader of the Competence Group Unified Communications



Dorothea Wohn

Assistant Member Services



### 4.2.13 Kompetenzgruppe Unified Communications

The eco WebRTC Task Force, founded by the Competence Group Unified Communications, kicked off its second year with a meeting during the WORLD of CLOUD 2015 in Frankfurt. Competence Group Leader Detlev Artelt gave a guided tour of the trade fair, introducing the exhibiting companies and their services. The meeting discussed how to create more awareness for WebRTC and inform users independently of manufacturers – from political, economic and social perspectives. All agreed that the topic will become more and more important for companies and will transform the communication landscape.

At the eco Gala on 25 June, the eco Internet Award in the category Unified Communications

was presented to AhoyRTC GmbH. On the 30 June, the possibilities of cloud solutions for companies were discussed in a live webinar, which included a moderated podium discussion. A further webinar on 31 July on "WebRTC – Telephony, Video Communication and Collaboration in Browsers" gave an introduction to WebRTC and how phone calls or video chats can be started with just a click within the browser, without needing additional software or a change in media.

#### EINFACH ONLINE ARBEITEN

Germany's first virtual Unified Communications fair, EINFACH ONLINE ARBEITEN (Working Simply Online), organized by eco under the

motto "Mobile work across borders with new communications concepts", was a great success with over 700 registrations. The fair provided detailed information on unified communications & collaboration, smarter working and real-time communication. With just a few clicks, visitors could listen to lectures in the auditorium or communicate with the exhibitors through video or chat; all for free without leaving the office or incurring travel expenses.

The event series "The best 10 of..." took place for the third time on 22 October during the Cologne Internet Week. Internet users selected the ten best of over 300 practice-focused tips for customer communication, which were then presented at the event.

More information:

<https://unified-communications.eco.de>



Judith Ellis  
International Member Services



Cáit Kinsella  
International Member Services

## 4.3 eco International

Internationalization was a key goal for eco in 2015. With an ever-decreasing difference in numbers between German and international members in eco, the decision was taken in 2015 to mark the anniversary year with an official change of the association name. Close to 50 percent of eco's membership have their headquarters outside of Germany. At the Annual General Meeting in June, members voted on removing "German" from the association name, changing it to eco – Association of the Internet Industry. The hiring of a second team member, Cáit Kinsella, to support Judith Ellis in the eco International team in late 2015 was also

indicative of the growth in international activities.

The year 2015 saw continual growth in the number of international members at eco: over 60 percent of new members in 2015 were based outside of Germany. The geographical distribution of the – at the end of 2015 – over 400 international members (close to half of the membership) can be seen in the graph on the right.

eco International continued working to support the membership both inside and outside of Germany. Activities were organized for international members within Germany, and for

Germans at the international level, enabling a two-way exchange of ideas and knowledge. Aside from international events and meetings, eco International continued developing eco's English-language communication, and supporting international members in a range of ways.

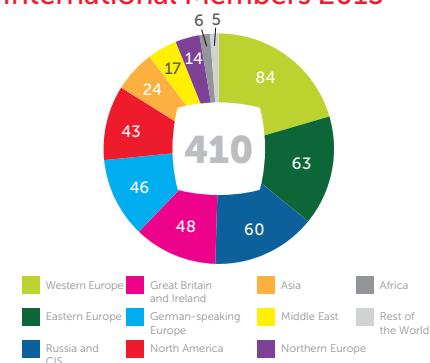
### Events

Two eco international event formats took place in 2015 as proof-of-concepts for future international projects. These were:

#### ecoTrialog Dublin

Close to 80 IT and DC experts from 5 countries met from 4 to 6 March for the ecoTrialog "Emerald Isle" in Dublin. The three-day networking event, which took place in Ireland for

### Geographical Distribution of International Members 2015



the first time, had the objective of introducing European data center specialists to the special characteristics of the Irish IT landscape. The trip involved three stations, including a visit to Enterprise Ireland, a tour of a Digital Realty data center and a tour of Commscope's cable production facility.

#### econnect Cologne

The two-day exclusive executive-level international event econnect took place on 24 to 25 June in Cologne. The focus of this event was offering our International members and contacts insight into the German IT market – for companies who wish to get a foothold in the German market, or are already on the ground in Germany but hope to get a better understanding of German business culture. The event brought together 22 IT professionals from six



different countries, and was supported by interesting and knowledgeable contributions from twelve German specialists, with tours, demonstrations and hands-on activities, talks, and plenty of opportunities for relaxed networking.

The tour included visits to three local businesses in the Cologne region. Topics for the wide variety of workshops and presentations covered such areas as German Business Culture, Socializing and Networking with Germans, The German IT Landscape, Peculiarities of German Law, and Branding for German Consumers.

There was a great deal of interest in the econect concept, and there are plans to organize the event on an annual basis.

eco International also became involved in developing a cooperation between European data center associations, including CESIT (France), DDA (Holland), EUDCA (Brussels), techUK, and Host in Ireland. The first public meeting of the cooperation took place in Paris in November, and discussed the varying needs of the data center industry in different European states. A report of this meeting was published in December on the eco International website.

eco International was also represented at a range of international partner events in 2015, where we were able to meet our international

members and increase our face-to-face contact with members. This included Datacloud Europe in Monaco, where eco CEO Harald A. Summa was also awarded the Lifetime Achievement Award. At HostingCon in Amsterdam, eco was represented with a panel session on data protection and surveillance. Other events included the RIPE meeting in Bukarest, Datacenter Dynamics in London, and the GCCM in Berlin.

### Communication

eco International relaunched the newsletter in the second quarter of 2015. A second newsletter, eco InSiDE was developed to mirror the econect concept, providing international readers with dedicated information on the German Internet industry, and on relevant developments and policy issues at the national level.

A series of interviews, both as articles on the website and as audio interviews for the eco International podcast, offered German members the opportunity to present themselves to an international audience and international members the chance to do the same for Germany. These articles and podcasts are highlighted in eco's English-language newsletters.

In addition to this, eco members, both German and international, now have the possibility of publishing their own English-language content – in the form of specialist articles – on the eco

International website members' contributions page, which was launched in 2015. In this way, our members can position themselves via the eco International platform, in order to reach a wider audience.

In late 2015, a further newsletter was started, which informs members of special offers and membership discounts on a range of partner events, both within and outside of Germany.

In line with the internationalization of eco, a range of publications were also published in both English and German in 2015. The eco Annual Report was published in English for the first time in 2015. As well as this, a white paper on the Safe Harbor decision was published in both languages in late 2015. The eco & Arthur D. Little Study, "The German Internet Industry 2016-2019" is set to be published in early 2016.

All content is published and distributed through social media channels (Twitter, LinkedIn, Xing, Facebook), offering members even further reach and attracting traffic to eco's website.

### Member Support

The eco International team is available to provide advice and support to international members on member services such as legal consultations, marketing opportunities, on finding business contacts within Germany, on partici-

pating in eco events or putting on their own events, and on the eco professional services.

### Staff

Cáit Kinsella joined the eco International team in October 2015. An experienced English teacher, translator and lecturer in Intercultural Communication, Cáit contributes to all areas of activity in the eco International team. In particular, she is regularly called upon to support colleagues in eco with translations, proofreading and developing presentations, and through her teaching activities is supporting the professionalization of English-language communication throughout the association.



*Dr. Sandra Schulz*  
*Head of Policy & Law*

## 5. Political Representation

The Politics & Law division coordinates all eco association activities on legislative and regulatory framework conditions for Internet and network policy, both nationally and internationally.

Via the Capital Office in Berlin, eco represents the political interests of members, and informs them about current developments and legislative proposals in Berlin and in Brussels. The industry positions, agreed on with members, flow into the political debate through discussions, events and through political press and publicity work. The representation of interests takes place directly and in a timely manner, and is based on sound specialist knowledge. Via mailings, newsletters and publications, members, the press and politics are regularly kept up to date on the positions of the Internet industry. All position papers, position statements, background papers and PR documents for this legislative term are available on the eco website for the division, at <https://politik-recht.eco.de>.

Many of these have been translated into English and are available on the international section of the website: <https://politik-recht.eco.de/international.html>.

Following is an overview of some of the work done by the eco division Policy & Law in 2015.

### Legislative processes and focus topics

The political representation of interests and regulatory work of the eco Capital Office covers both national and international developments in Internet and network policy. More and more often, the network policy debates and decisions are being led and made in the EU, and so the eco team keeps a close eye on the European components of every legislative process. There is also a close cooperation with the European Association for Internet Service Providers, EuroISPA. Since March, the Law and Regulation team has been strengthened by the addition of Elisabeth Sift.

### Germany

For the Internet, the year 2015 was shaped by the events in Paris. The reintroduction of blanket data retention was brought back onto the agenda in Germany after the attack on Charlie Hebdo – despite numerous protests, unclear technical requirements and lack of unity in the government coalition – and was re-adopted in a knee-jerk reaction. eco rejects Blanket Data Retention and in the reporting time produced a range of papers, led discussions and organized events on the topic.

The changes to the Telemedia Act, with the objective of making it easier to offer Wi-Fi, was considerable work for both the eco Capital Office and for the political scene. eco published a highly respected assessment which, among other things, criticized the provider liability as being unsustainable, and through this was able to engender a re-thinking on the political level. It will be seen in 2016 how the proposal fares in the German Federal Cabinet.

There were intensive consultations on the IT Security Act, which was then adopted during the reporting period. Further burdens for TC companies through obligations to report were in the end prevented through lobby work. Despite this, the IT Security Act will impact companies in the Internet industry, as data center operators and Internet providers are subject to the act, and from a certain "size" will have the obligation to report. The ordinance which specifies the parameters will be discussed with industry representatives in 2016.

The end of the year was also shaped by political occurrences. In reaction to the large number of refugees, there was an increase in hate speech in the Internet, especially in social networks. The German Federal Ministry for Justice and Consumer Protection established a task force on the matter, which eco participated in. One initial publication of results was presented in December 2015, and the measures described will continue to occupy the industry in the next year.

An overview of the numerous Internet and network policy initiatives and activities of the German Federal Government that were of importance to the Internet industry follows:

- Reintroduction of the highly controversial Blanket Data Retention
- Changes to the Telemedia Act for the simplification of Wi-Fi provision
- Year of the Federal Government's Digital Agenda



Foto: Christopher Cotrell, CC BY NC 2.0

- Adoption of the law for increasing the security of IT systems (IT Security Act)
- Federal/State Commission for the restructuring of media regulation
- Final revision of the Youth Media Protection Treaty

These and other topics, like Auxiliary Copyright for Publishers, the Film Funding Act, and the Right to be Forgotten were accompanied by the Policy and Law division with position papers, position statements, background papers, and press activity, as well as participation in hearings, events, and discussions.

### Europe and the World

The lobby work in Brussels and in the EU was strongly impacted in the reporting year by the

topic of Data Protection. For one thing, there were negotiations all year on the European General Data Protection Regulation, which was then adopted in December, and for another, the Safe Harbor Agreement was unexpectedly declared invalid in October. Both topics will continue to occupy eco in 2016.

The following topics stood in the center of the political lobby work for the Capital Office in 2015 and were accompanied by position statements, participation in consultations, press work, and events:

- Adoption of the European General Data Protection Regulation
- Overturning of the Safe Harbor Agreement
- Adoption of the Net Neutrality Regulation
- Adoption of the NIS Directive

- Evaluation of copyright law
- Strategy paper on the Digital Single Market package
- Consultations on future broadband requirements and on a modern legal framework for telecommunication
- Consultation on the regulation of platforms and intermediaries

In the European lobby work, eco was again this year involved in a close exchange with the European umbrella organization EuroISPA.



*Henning Lesch, Attorney-at-Law  
Head of Law and Regulations*

*Folke Scheffel  
Solicitor Internet and Media Law*

*Elisabeth Sift  
Solicitor IT Law*

## 5.1 Legislative Processes and Focus Topics

### 5.1.1 Germany

#### Blanket Data Retention

One of the most important and most controversial topics of 2015 was the reintroduction of blanket data retention in Germany. In the coalition contract between the SPD and the CDU/CSU from winter 2013, the implementation of the corresponding EU regulation was agreed upon. However, after the ECJ found the EU directive to be incompatible with European civil rights and declared it invalid in April 2014, the German obligation to implement the law evaporated. Despite this, on 15 April 2015,

the Federal Minister for Justice, Heiko Maas, together with his colleague from the Ministry for the Interior, Thomas de Maizière, put forward guidelines for a new legal regulation.

Only a few weeks later, on 18 May, a draft bill was sent to the associations by the Ministry for Justice and Consumer Protection. On 27 May, the Federal Government agreed on the proposal and on 12 June, the first reading took place in the German Parliament.

The new regulation provides for the retention of all connection data for telephone and SMS, without cause or suspicion. The connection data is to be retained by the provider for ten weeks, and location data for four weeks.

eco was and remains fundamentally against the reintroduction of blanket data retention. The law infringes the civil rights of citizens, contradicts the stipulations from the European Court of Justice and is technically barely practicable. In addition, companies are being expected, now for the second time, to make investments running into the millions – without it being clear that the law will actually pass the German Constitutional Court or the European Court of Justice.

A specialist hearing on the topic took place in the Bundestag, but almost exclusively the

invitees were supporters of the obligation to retain data, from the police and justice. Technical expertise was not represented.

Despite the enormous resistance from the opposition, from chambers, associations and the civil society, the new law was adopted unchanged in October, and took effect on 18 December. The implementation of the requirements must be undertaken by 1 July 2017 at the latest – the Federal Network Agency (BNetzA) and the Federal Office for IT Security (BSI) have one year to develop concrete technical requirements for companies. Correspondingly, providers will be left with six months to implement the requirements in their technology.

Lawsuits against the obligation to retain are already in process from several sides. eco will

also actively support a member company that has decided to take the matter to court.

### Changes to the Telemedia Act

In spring, the Federal Ministry for Economic Affairs and Energy (BMWi) put forward the long-awaited proposal for changes to the Telemedia Act. The objective of the draft was to create legal certainty with regards to the liability for the provision of Internet access via local wireless networks. In the draft, there was an additional amendment of the liability rules for the retention of information in §10 TMG.

In April, eco took a position on the planned amendments: in eco's eyes, the Federal Government's proposal has only limited suitability for achieving the goal of providing greater legal certainty to Wi-Fi operators and for thus creating impetus for greater use of this technology. Instead, the revision created new undefined legal terms which would lead to new uncertainty. The greatest problem with the proposal is, however, the new liability regime for hosting providers. Contrary to European legislation and previous case law, the liability risks are one-sidedly transferred to the providers of storage services.

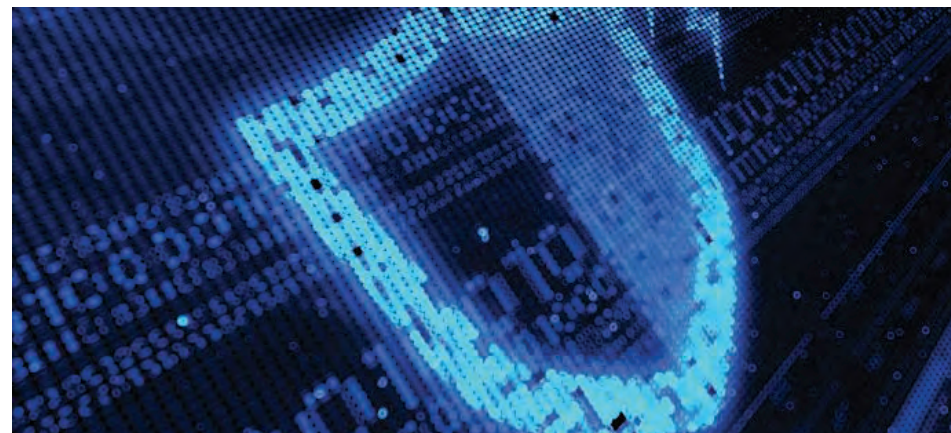
In conjunction with the European Commission notification procedures (which every national law related to technology is required to undergo), eco presented a comprehensive legal assessment of the intended changes to § 10

TMG from a renowned law firm for copyright and media law. This comes to the conclusion that the planned regulation not only completely contradicts the E-Commerce Directive, but also does not harmonize with the finely worked-out liability system of the Telemedia Act.

This assessment, commissioned by eco, became as a result one of the central arguments against an intensification of hosting provider liability. eco was able to make it known to all relevant parties; the author of the assessment was also invited to participate in the specialist hearing of the Economic Committee. eco participated in a range of specialist discussions organized by the factions on the planned changes to the Telemedia Act. Certainly, this was also one of the triggers which spurred the political decision makers towards a re-thinking. The revision of the hosting provider liability was, after the consultations, removed from the draft law. This is an important success for the entire Internet industry.

### IT Security Act

The committee responsible for the IT Security Act in the Federal Parliament agreed on the draft law in June, with slight changes to the original government proposal. With the IT Security Act, operators of critical infrastructure – equipment and plants whose functioning is central to the community – are obligated to comply with minimum IT security standards.



Already in advance of the parliamentary consultations, eco had contributed the position of the Internet industry on the cabinet proposal back in December 2014. In addition, even before the cabinet proposal, eco commented on the draft from the Federal Ministry for the Interior in the context of the hearing organized by the ministry. eco welcomed the changes introduced – insofar as they lead to a more precise and practical regulation. The introduced evaluation of the obligations of providers of critical infrastructure and the narrowly designated purpose of the investigation results of the BSI are positive.

On 12 June, the German Federal Parliament adopted the IT Security Act. With the publication of the legislative text, the law came into effect on 25 July 2015. The changes for the increase of IT security affect particularly the

Telemedia Act (TMG), the Telecommunications Act (TKG) and the BSI Act.

For the implementation of the IT Security Act, the Federal Ministry for the Interior is working on a corresponding ordinance for the information and communication industry. In conjunction with the ordinance, it is to be determined which companies specifically are affected and will be designated as "critical infrastructure". Individual ordinances are to be designed for every relevant industry, including energy, IT and telecommunications, transport, health, water, food, finance and insurance, during 2016. For the sector relevant for the Internet industry, the ITC sector, the pertinent ordinance is already in the final phase, and should come into effect by mid-2016 at the latest.



The European Parliament accepted the proposed amendment from the Commission on 12 March 2014, which contained extensive changes. The notions of the Parliament diverged more and more strongly from those of the Member States throughout the negotiation period. On 15 June, the Justice and Home Affairs Council finally agreed on a general approach for a joint proposal. In December, the trialog negotiations, the negotiations between the three main European institutions, the Commission, the Parliament and the Council, began. During these, the General Data Protection Regulation was finalized. As it was a European "regulation", it will have immediate application after a transition period of two years.

law will then need to be amended. eco will continue to be actively involved in the process.

### Telecom Single Market and Net Neutrality

The European Parliament and the Council of European Member States agreed on a compromise in July on the issue of net neutrality and the abolition of roaming charges. In the regulation of net neutrality, the question is dealt with of to what extent network management in data traffic networks should be permissible. Also, to what extent, in principle, the handling of data packets may deviate from equal treatment in the transport of the data through the worldwide networks.

## 5.1.2 Europe and the World

At the beginning of 2012, the European Commission presented its proposal for a new data protection law. This was to replace the existing regulation 95/46/EC, and to be valid immediately in all Member States.

With a horizontal framework designed for full harmonization, the differences in implementation and application of the former data protection law are to be removed. In this way, the European Commission wants to improve the data protection rights and the right to informational self-determination of European citizens. This should also create the foundation for a modern data economy in the European Digital Single Market, to make the European Union

fit for the competition in the digital markets of the future.

The importance of the initiative should not be underestimated. Key words and phrases like cloud computing, Big Data, Internet of Things and data as the "new oil of the world economy" play witness to the extensive interests that should and must be taken into account for this legislative initiative. As important as the initiative is, it is also complex. Hardly any other European legislative process in this area is as politically controversial, has been so widely discussed and has attracted so much media attention.

eco accompanied the legislative process for the General Data Protection Regulation intensively. Position papers and position statements were written regarding it. Alongside this, eco took the opportunity to present the position of the Internet industry at events at the national and international level, and contributed to the process. The European process with regard to the General Data Protection Regulation was attended to intensively in close alignment with EurolSPA.

The German legislator will undertake an extensive examination of German data protection law for compatibility with the General Data Protection Regulation, after the European regulation has taken effect. If necessary, German

The representatives of the Parliament and the European Member States agreed as follows on this controversial topic: the fundamental equal treatment of data traffic – which means that all data in conjunction with an Internet access service must be treated equally. Network management should merely be possible in temporarily limited, narrowly defined exceptions, for example in the case of network overloads. Special services are allowed, as long as they do not endanger access to the open Internet.

Special services distinguish themselves in that they are guaranteed a specific service quality. The technical requirements for this can, however, not be provided from the "normal" open Internet, which is based on the principle of



best effort. As an example for a special service, tele-medical applications and certain quality-assured video and television services are often mentioned. The so-called zero-rating, the non-inclusion of data used for specific Internet services, such as Spotify, in the total data volume available to a customer, should be possible.

The impact of such a practice should be observed by national supervisory authorities. They have the responsibility to supervise the compliance with regulations for the protection of the "open Internet". They have the authority to prescribe a certain minimum service quality for ISPs for the Internet access services. With regard to the measures for network management and the quality of access services, service providers are obligated to adhere to transparency in dealing with supervisory authorities and consumers.

These principles have also flowed into the regulation, which was approved by the European Parliament in October 2015. It will come into effect in July 2016. A consultation with BEREC on the concrete implementation steps has been announced, which should be held in June.

eco accompanied the controversial discussion on a net neutrality regulation intensively in 2015. This involved the publication of a position paper and participation in relevant specialist events on the topic. Alongside this, the

opportunity was taken to shed light on the complex topic in a range of event formats, and to illustrate the need for further clarification of aspects of the European compromise.

In 2016, the topic of net neutrality will continue to be on the political agenda, and will continue to be accompanied by eco. In the foreground are the questions of the concrete implementation and the formulation of the net neutrality regulation, and the associated details in need of clarification.

### Right to be Forgotten

On 13 May 2014, the European Court of Justice (ECJ) came to a decision regarding the then valid Data Protection Directive (95/46/EC), stemming from the year 1995. The verdict attracted world-wide attention and was described in the press as the creation of a "right to be forgotten". It was lauded as a victory for data protection over the large Internet corporations. However, there were soon loud voices proclaiming great concerns about the consequences of such a verdict. These impacted above all on the freedom of information and opinion in the Internet. The wide media interest was largely due to the question the verdict raised, one long contested in network policy discussions: what is the right balance between privacy (data protection) and the freedom of information and opinion in the age of the Internet. This is something that has been growing into an issue for the whole of

society with the increasing importance of the Internet.

In conjunction with a background paper and position papers, eco presented the associated issues and the view of the Internet industry. The "Right to be Forgotten" was also intensively discussed from the range of perspectives at the eco MMR conference in Berlin.

### Copyright

The European Commission, which announced soon after its appointment its intention to make copyright a focus topic of its work, underlined this intention in May with the presentation of the Digital Single Market Package. The Commission wants to improve the cross-border access to content and services through the abolition of geoblocking. This should also increase the portability of Internet content. The Commission gave itself the goal of more strongly harmonizing copyright law in general. At the end of the year, a concrete proposal was put forward on the improvement of cross-border access.

The European Parliament was also occupied with copyright law, and presented its report at the end of 2014. The report put the clear focus on a harmonization of copyright in Europe and on a reduction of the limitations and exceptions. Calls for the inclusion of a fair-use clause were, however, unsuccessful. The call for an expansion of the right to quote audio-

visual content was also rejected. The application for Auxiliary Copyright for Publishers at the European level was also rejected, and as such is not included in the report. Limitations to the freedom of panorama could be averted in the concluding agreement. The report was generally praised for its balance, and it forms a good working basis for the Parliament. However, when it comes to the concrete negotiations for a regulation, the negotiation position of the Parliament will need to be worked out anew.

For eco and its member companies, the topic copyright has become increasingly important over time at both the national and European level. Advancing digitalization and the provision of high-quality digital content via the Internet pose challenges which make the adaptation and modernization of copyright necessary. In the reporting year, the activities of eco focused on the Commission's and Parliament's efforts towards reform and revision.

### NIS Directive

In order to increase IT security in Europe, the standardization of the state laws of the Member States has been on the agenda since 2013 to. To this end, the European institutions developed a proposed directive for collective network and information security (NIS Directive). This defines measures for guaranteeing security in the form of minimum harmonization obligations.

In March 2014, the European Parliament agreed on an amended version of the Commission proposal. The parliamentary committee responsible (IMCO) made significant changes to the draft regulation. After the incumbent Italian Council Presidency was unable to reach a compromise in the legislative process in the second half of 2014, the Latvian Presidency, in office since the beginning of the reporting year, made considerable progress at the end of June. In December, the breakthrough came: representatives of the EU Commission, the European Parliament and the Member States agreed on a formulation of the directive in the trialog negotiations. By the end of December, the legislative text had been finalized. Now the Member States are obligated to implement the agreements within 21 months of the publication of the directive. In Germany, the IT Security Act, which follows the same objective, was passed before the agreement at the European level.

With regard to the question of which companies would be defined as "critical infrastructure", one of the most contested issues was to what extent "Internet Enablers" fall within the application of the law, and are thus subject to the regulatory obligations of the directive. It is still to be examined to what extent further implementation will be needed above and beyond the German IT Security Act. As the security level in Germany is traditionally very high, it is not anticipated that there will be a need for further investment.



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eco followed the legislative process of the NIS Directive very closely and addressed the interests of its member companies in a position paper with background information. The focus was on consistency and the standardization of the national and European regulations in the area of IT security, in order to avoid unnecessary implementation costs for companies.

### Digital Single Market Strategy

At the beginning of May, the EU Commission published its strategy for the creation of a unified digital single market. With this, the Commission is following the objective of guaranteeing the free flow of goods, people, services, and capital.

The strategy covers the following three areas: online access for consumers and companies to

goods and services, the creation of the right conditions for flourishing digital networks and services, and the optimal exploitation of the growth potential of the European digital economy. The central components of the strategy are: the revision of copyright, the unification of telecommunications regulations and the examination of possible changes to the E-Commerce Directive.

In the revision of copyright, above all the curtailment of unjustified geoblocking is in focus. This is hoped to improve cross-border access to online content. For the telecommunications regulations, the Commission wants to attempt to create a level playing field for market participants, so that they can offer competitive services. Of these, it is to be expected that over the top (OTT) services will be affected. A standardization of platform regulation is also

planned. The Commission is continuing to weigh up transferring greater responsibility to providers and giving them a greater duty of care for the administration of their networks and systems. In addition to this, the activity of providers with regard to copyright-protected works should be more clearly regulated, as they are increasingly involved in the dissemination of content. The Digital Single Market Strategy also contains a timetable which envisages the publication of the first concrete plans for measures this year.

At the end of the reporting year, the Commission opened another consultation on the role of platforms and intermediaries, in which eco was also involved. The consultation not only asked for an appropriate definition of the term "intermediaries", but also about appropriate rights and obligations for different intermediaries. eco argued against a duty of care for providers, and called for the E-Commerce Directive to be left unaltered. The results and conclusions from the consultation are not expected before summer 2016.

### Consultation on Revision of AVMS Directive

As announced in the Digital Single Market Strategy, the European Commission began a consultation in July on the upcoming revision of the Audiovisual Media Services Directive. eco was also involved in this consultation. The catalog of questions for the consultation was

extensive. Every single aspect of the directive was examined to see whether these were still up to date and how they could be amended. There was also the possibility to vote for each option or to make suggestions. The results of the consultation are expected in the first half of 2016.

### Safe Harbor and EU-US Privacy Shield

According to European data protection law, the personal data of European citizens can only be transferred to states outside of the European Union if the third country can guarantee a "sufficient" level of data protection. In many third countries, in particular in the USA, there is no data protection law that is comparable to the EU. In order to enable data transfers to continue to the USA, given the economic importance of transatlantic data transfer, the European Commission negotiated the Safe Harbor Agreement with the US Federal Trade Commission in the year 2000. Under this agreement, companies that process the data of European citizens in the USA could promise the FTC to comply with a "sufficient" level of data protection, as understood in European law. On the basis of the agreement, these companies would then be assumed to ensure a "sufficient" level of data protection, offering a so-called "safe harbor" for the data of European citizens.

The Austrian Max Schrems saw this practice of data transfer as contrary to European law.

Using Facebook as an example, he argued that companies in the USA could not ensure a "sufficient" level of data protection, made clear through the revelations of Edward Snowden, and took the case to the European Court of Justice (ECJ). The ECJ declared the Safe Harbor Agreement to be invalid on 6 October. With this decision, one of the most important legal foundations for the transfer of data to the USA was no longer applicable. More than 4,000 companies had at that time been invoking this agreement.

eco brought itself into the discussion on the required successor regulation to Safe Harbor early in the interests of its member companies. The issue was pointed out at both national and international levels, and a speedy successor regulation was called for. For this, among other activities, eco published a background paper, organized events in Brussels and Berlin, and participated in specialist discussions.

Consequently, the representatives of the European data protection authorities in the Article 29 Working Party agreed to wait until the end of January 2016 for the actions of the Commission. If no new agreement with the American Government were to be negotiated by that time, then all available means should be used to enforce compliance with European data protection law. The EU Commission presented the key points of a successor agreement at the beginning of February 2016, the so-called EU-US Privacy Shield. eco welcomed this swift

agreement and the legal certainty for companies it provides.

It is assumed that the EU-US Privacy Shield will come into effect in mid-2016, after in-depth examination.

### Internet Governance

The topic "Internet Governance", which above all deals with the questions of the future shaping of Internet policy and the future technical and administrative regulation of the Internet, gained increasing importance at both the European and the international level. eco has been advocating for years for a strengthening of the successful multi-stakeholder Dialog on Internet Governance and is convinced that this model is the best variant for the development of a sustainable Internet governance system with broad social acceptance. As the Association for the Internet Industry, it is an important concern for eco to maintain and carry forward the multi-stakeholder based self-administration of the Internet. Politics and companies, as well as all other stakeholders, should therefore become involved in the relevant committees in which the future shaping of the Internet and Internet policy is discussed.

### Restructuring of Internet Administration

One of the central topics and objects of the discussion of Internet governance was the

restructuring of Internet administration. At the core of the debates and disputes on Internet governance is the question of who has and who should have the supervisory function over the central resources for the operation of the world-wide Internet. A multi-stakeholder approach has established itself, in which a variety of committees and bodies feel themselves to be responsible for a variety of areas in Internet administration.

For some time now, the international discussions have focused above all on what the reform of ICANN could look like. So far, the US government has played a leading role in Internet administration, given that the US Department of Commerce has the oversight over the ICANN IANA functions. With the announcement by the USA of their intention to relinquish control over the important Internet Assigned Numbers Authority (IANA), the question of the restructuring and reorganization of IANA gained in importance. IANA is, among other things, responsible for the allocation and coordination of central Internet resources like numbers, names, and IP addresses, as well as for the Domain Name System. The discussion on the future model for the reform and the supervision of IANA is therefore relevant for companies in the Internet industry, as this can impact the security, stability and robustness of the central Internet infrastructure. The reorganization of ICANN is the subject of international negotiations.

eco has participated actively at the national, European and international level in the discussion process, and will continue to accompany these intensively. A range of events took place which informed participants on the current state of discussions and made it possible for other stakeholders to exchange ideas and information with the BMWi. eco is in close dialog with the Germany Federal Ministry for Economic Affairs and Energy on this topic.

In March, eco, DENIC and the German section of the Internet Society developed a joint position paper together with the BMWi – the department which has the leading role in negotiations on behalf of the German Federal Government – and submitted it to ICANN as Recommendations for Action. The recommendations had the objective, among others, of expanding the influence and control mechanisms for all interest groups. Thus, an examination process for individual cases, e.g. for Domain allocation, should be introduced and the business processes of ICANN should undergo regular examinations. Rules regarding country-specific Top-Level Domains should remain the responsibility of the individual countries and should be dealt with under the respective local legislation. The Recommendations for Action are largely oriented towards common principles like the support of the multi-stakeholder model, the focusing of the ICANN mandate on the existing area of functions and the retention of the openness, de-centrality and interoperability of the Internet.

The ICANN mandate of the US Government should have ended in September. As a result of the significance associated with it, and the complex processes of finding consensus, there was considerable need for discussion of the range of options and models, meaning that a regulation could not be agreed upon within the announced time-limit. However, it is to be expected that the mandate will be extended until it is possible to agree on a consolidated proposal for a reform of ICANN and a restructuring of the IANA functions. The reform process is expected to continue well into 2016.

### EuroDIG

At the European level, the European Dialogue on Internet Governance (EuroDIG) has established itself as a discussion platform. It is the most important event at the European level in which stakeholders from industry, governments, science and the civil society can exchange ideas on the future shaping of the Internet.

The 2015 EuroDIG took place on 4-5 June in Sofia. The event took place under the title of "Shaping the Internet Together". Current developments and unsettled policy questions in Europe were discussed. In focus were the developments in the area of European copyright law, the ICANN reforms, and the IANA transition. Alongside these, net neutrality, data protection and privacy, cyber security, and questions of cross-border jurisdiction were central topics which were discussed at EuroDIG.

eco was represented at EuroDIG 2015 by Prof. Michael Rotert, who took part as an expert in numerous workshops and panels. Among other things, Prof. Rotert took part in a podium discussion organized by the European Council, which looked at the topics of security and human rights. He was also on a panel on international Internet governance, which looked at the results of the NETmundial conference. Here, he was able to contribute his expertise as a member of the German delegation.

### IGF

The tenth international Internet Governance Forum (IGF) took place from 10 to 13 November in Joao Pessoa in Brazil. The participating representatives of international governments, companies and NGOs, as well as participants from the civil society, exchanged ideas on the current questions of Internet governance, such as Internet administration, trust and security, and human rights in a digital era. In the focus of the international IGF was the further development of Internet governance, the enabling of sustainable growth and current issues in cyber security and trust in the Internet. The discussions and issues relating to the reform process of the IANA stewardship was again on the agenda in 2015.

### IGF-D

The Internet Governance Forum Deutschland, initiated by eco and organized jointly with fur-

ther partners, is an open and informal multi-stakeholder discussion platform for the government, private enterprise and the civil society, as well as representatives from the technical and academic community in Germany for the handling of questions relating to the social, economic and political development of the Internet.

The IGF-D took place in May in Berlin for the ninth time. This event served to prepare for the EuroDIG event taking place in June in Sofia, and the international IGF in November in Brazil. Also for the IGF-D, one of the focuses was the shaping of future Internet governance, particularly with regard to the restructuring of Internet administration and the associated reform-process of IANA administration. Alongside these were a range of panels debating the German government's Digital Agenda, the impact of the NSA surveillance scandal and the current status of the introduction of new Domain endings.

At the end of 2015, eco discussed with further partners the future development of the IGF-D. The objective is a professionalization of the IGF-D and a broader inclusion of further stakeholders. For this, the IGF-D should establish a Steering Committee which includes all relevant stakeholder groups. The first steps and measures were taken in the reporting year and are to be taken further in 2016.



### 5.1.3 EuroISPA

The umbrella organization for European Internet Service Provider associations, EuroISPA, currently represents more than 2,900 ISPs and is thus the largest provider association in the world. In 2015, the association "Nederland ICT", which represents more than 550 Dutch Internet and IT companies, became an association member. Companies like Amazon, Microsoft, Google and Facebook are also directly represented in EuroISPA over the industry forum.

In 2015, eco Board member Oliver Süme was elected for a further term as President of EuroISPA. He is also Chair of the Data Protection Committee in the association.

The year 2015 was the first year of the implementation of the "EuroISPA 2020 Strategy", which the association developed and adopted the previous year against the backdrop of the European Commission's "Digital Single Market Strategy". The European umbrella organization can look back on a successful year, with a range of events, many discussions with political contacts and a further expansion of communication and PR activities.

Thematically, a range of legislative proposals were initiated at the European level which touch on the European Internet industry. In cooperation with other associations, EuroISPA was able to obtain further hearings, in particular

in relation to the General Data Protection Directive, and successfully advocated for diverse innovation-friendly formulations in the regulation.

The planned EU Network and Information Security (NIS) Directive was also a crucial topic, in which EuroISPA advocated especially for exceptions for small and medium-sized companies and generally called for as little regulation as possible of the sector.

Further successful efforts were undertaken for a reform of the e-Commerce Directive, called for by various interest groups, with the objective of making provider liability more clear-cut.

Towards the end of the year, EuroISPA also contributed actively to the discussions for a successor to the Safe Harbor Agreement, overturned by the European Court of Justice, and represented the interests of the sector in a range of high-level events. Overall, EuroISPA is on the right path and is well-positioned as a permanent contact point for political decision-makers in Brussels.

Details about further activities can be found in the EuroISPA Annual Report 2015, which is available for download at: [www.euroispa.org](http://www.euroispa.org).



*Alexandra Koch-Skiba, Attorney-at-Law  
Head of Complaints Office*



*Peter Paul Urlaub  
Solicitor Complaints Office*

## 5.2 eco Complaints Office and Youth Media Protection

The successful work of the eco Complaints Office in the fight against illegal online content is central to eco's engagement in the area of youth protection. eco is also involved, along with partners from politics and the industry, in a range of initiatives and alliances for combating youth-endangering Internet content and supporting youth protection online. In addition to this, eco is involved in the consultations on the revision of the Youth Media Protection treaty.

### eco Complaints Office for illegal Internet content

Internet users can report potentially illegal Internet content, in particular in the area of youth media protection, free of charge to the eco Complaints Office (<https://international.eco.de/internet-complaints-office.html>), and thus contribute to the fight against such content at both the national and international levels.

eco has now operated the Complaints Hotline for more than 15 years. The hotline has been available via the web portal <http://www.internet-beschwerdestelle.de/en/>, operated

together with the Voluntary Self-Monitoring of Multimedia Service Providers (FSM e.V.) since 2004. Reports submitted there are processed by eco and the FSM according to their respective responsibilities and rules of procedure. The portal also provides a great deal of information and advice on the topic of media competence.

Until the end of 2014, the eco Complaints Office was financially supported by the European Commission, with funding set aside for the Safer Internet Program, and since 2008 as part of the German Safer Internet Center. In the German Safer Internet Center, eco works together with FSM, jugendschutz.net, the "Nummer gegen Kummer" hotline and klicksafe.de. In January 2015, the Safer Internet Center was awarded continued financial support from the European Commission for a fur-

ther 18 months through the Connecting Europe Facility.

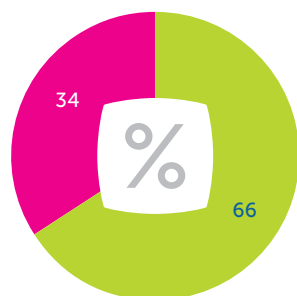
Here, the complaints offices are provided with proportional financial support, especially for the processing of complaints about representations of the sexual abuse of children and young people, and complaints about racist online content. In January 2016, the partners applied for a further 30 months of support from the Connecting Europe Facility, from starting from July 2016.

Representation of the sexual exploitation of children and youth, so-called "posing", cannot be distributed under German law. Through the financial support of the German Federal Ministry for Families, Seniors, Women and Youth, the eco Complaints Office was able to strengthen its engagement in this area in 2015, and collect and exchange statistical information – especially regarding deletion times – with the other German complaints offices at FSM and jugendschutz.net.

### 2015 Statistics

The eco Complaints Hotline team, consisting exclusively of lawyers, received around 60 per cent more complaints in 2015 than in the previous year, and dealt with a total of 223,430 objects of complaint. The area "Complaints about emails" made up by far the greatest proportion, with 192,254 reports. This was followed by complaints about Usenet contribu-

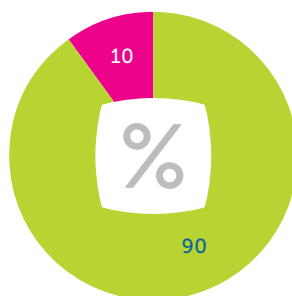
## Success Rate after 2 Days



■ offline ■ online

Source: eco Complaints Office, Germany, Child Sexual Abuse Material 2015

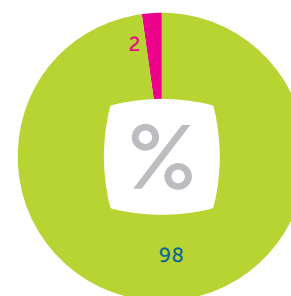
## Success Rate after 4 Days



■ offline ■ online

Source: eco Complaints Office, Germany, Child Sexual Abuse Material 2015

## Success Rate after a Week



■ offline ■ online

Source: eco Complaints Office, Germany, Child Sexual Abuse Material 2015

tions (29,385) and websites (1,763). Leaving out the complaints submitted about spam, 97 percent of the examined objects (30,491) contained images of child or youth pornography or grooming for child and youth pornography. This corresponds to an increase of ten percent in comparison to the previous year. Complaints about incitement of the masses and propaganda in violation of the constitution also increased considerably, with the number of complaints almost tripling. In contrast, complaints relating to freely accessible adult pornography and developmentally damaging content made up a mere one percent of the reports received.

When it comes to the justified complaints, the high proportion of child sexual abuse material (CASM) is striking, which is a result of the intensification of the criminal law which came

into effect in January 2015: 82.4 percent of the justified complaints. At the same time, material which could be seen as overtone lead-up to CASM accounted for about one quarter of the figures from 2014, and sank to 2.8 percent. The rise in complaints about incitement of the masses and propaganda in violation of the constitution was also reflected in the justified complaints: 4.7 percent of justified complaints concerned this area, in comparison to 1.3 percent in 2014.

Take-down times for CASM on the World Wide Web were faster than in the previous year: Child sexual abuse material was no longer accessible world-wide within, on average, 4.5 days from the time of the report being received by the eco Complaints Office; for content housed in Germany it was 2.08 days – including weekends and public holidays. Equally short take-down

times were achieved for images depicting posing (images of minors in unnatural, sexually explicit poses, as defined by the German Youth Media Protection Treaty): world-wide, such content was taken down within 3.9 days from the report being received, and within 2.5 days for content hosted in Germany – including weekends and public holidays.

The complaints were – according to the type of offence and taking into account the country in which the content was hosted – forwarded to the relevant law enforcement agency, the content provider, the hosting provider and/or the relevant member of the INHOPE network.

As was also demonstrated in the German Federal Government report for the year 2014 on the deletion of tele-media content with child

pornographic content, the principle of "Notice and Takedown" works successfully.

## INHOPE

eco is a founding member of INHOPE, the international umbrella organization for Internet complaints hotlines ([www.inhope.org](http://www.inhope.org)), which celebrated its 15th birthday in 2014. INHOPE has coordinated a network of Internet hotlines since 1999, and was financially supported by the European Commission until the end of 2014 as part of the Safer Internet program. Worldwide, INHOPE is the leading organization for the international exchange of user complaints in order to combat illegal content in its country of origin with the help of law enforcement agencies. Currently, INHOPE is comprised of 51 complaints hotlines in 45 countries, including three hotlines established with the support of the INHOPE foundation. In 2014, New Zealand and Sweden swelled the ranks of member hotlines.

In 2014, eco also advocated in committees for the targeted expansion of the network and for the funding of the world-wide and effective Notice and Takedown of images of child abuse. In addition, eco was active in the development of Best Practices (in particular with regard to the processing of reports of images of the sexual abuse of minors in P2P networks) and in the pilot project "IC-CAM", the further development of the INHOPE database, initiated by INHOPE for the exchange of complaints within the network.



*Sidonie Krug*  
*PR Specialist Policy & Law*

*Christin Wagner*  
*PR Assistant Policy & Law*

## 5.4 Political Communication

### Successful continuation of PR strategy 2015

The interplay between classic lobbying and political PR work was again successful in 2015. The central messages of the association were communicated in the public arena via media and multipliers, and debates on current political issues were initiated and actively shaped. This is particularly clear in the doubling of press references in leading media – media attention rose 65 percent from 2014 levels, giving the political side of the association a strong voice in reporting.

In order to provide politics and the press with regular up-to-date information on the association, the Capital Office successfully launched a new newsletter after the summer break, "eco Politik". The newsletter (in the German language) is available as a free subscription and each edition contains facts and figures on a top Internet topic.

### Service for members

Alongside the improvement in external communication, a strengthening of internal communication on political topics is an important goal of the eco Capital Office. One important measure for this was the introduction of the

eco Newsletter "Politik & Recht" (German language), which informs members exclusively about current developments in national and international Internet and Network policy topics.

A range of the internationally relevant content is translated into English and available on the international page of the Policy and Law website, <https://politik-recht.eco.de/international.html>.



## 6. Professional Services



### 6.1 Certified Senders Alliance

The Certified Senders Alliance (CSA) was founded jointly with the German Dialog-marketing Association (DDV) back in 2003. As a certifier of mail senders, the CSA sets quality standards for commercial mailing. By certifying email service providers and companies that send their emails with their own IPs, those standards are being established. Applicants must fulfill high quality standards to be included; at the same time, they need to undergo continuous monitoring by the CSA. After successful certification, senders may use the CSA seal of certification, and send their emails with the CSA Whitelist. In doing so, they benefit from improved deliverability to ISP partners of the CSA.

At the time of reporting, the CSA was able to report strong growth in comparison to the previous year, with 11 new certifications and a total of 105 participants and 43,363 active IP addresses. This growth required investment in tools to ensure automated quality control, and in the customer portal to maintain data and IP addresses. The CSA was also able to record growth in the number of partners. With new ISP and technology partners like Cisco Systems, Kaspersky Lab and Unity Media, they were able to further strengthen the basis for their increasingly international orientation.

This focus was also reflected at the CSA's second event, the CSA Summit 2015, which took place in Cologne and was attended by partici-

pants from 9 nations and a range of international speakers. The feedback from the participants was evaluated in questionnaires and proved to be very positive. At the Summit, industry experts like Dr. Torsten Schwarz (ABSOLIT) and Marcel Becker (AOL) addressed marketing topics and technical topics relevant to email marketing. As an interface between senders and recipients, the CSA discussed current market observations and their future orientation.

The CSA presented themselves with talks at international trade fairs and conferences like the M3AAWG in Dublin and the dmexco in Cologne. In so doing, they emphasized the relevance and significance of quality standards for email marketing with advertising companies and at the same time positioned themselves even more strongly in that field. These

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*Julia Janßen-Holldiek*  
*Manager Business Development & ISP Relations*

*Maike Marx*  
*Marketing & Customer Relations*

*Qadir Rostamzada*  
*Marketing & Business Development*

*Claudia Schönberger*  
*Office Manager*

talks were also held for members of partner associations like the Austrian Dialog Marketing Association (DMVÖ) and the National Association of Digital Economy (BVDW) as part of workshops and were accompanied throughout the year by related press releases.

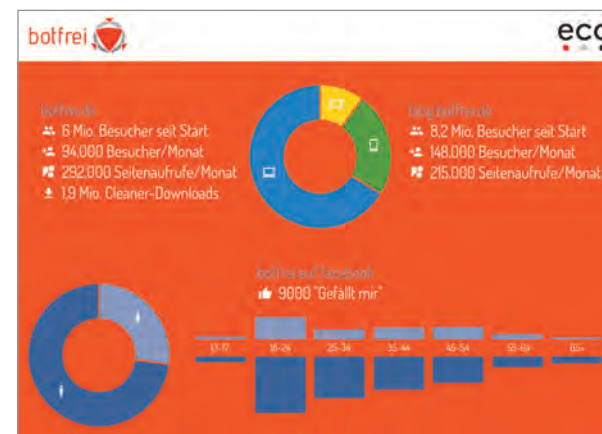
On the basis of an eventful and successful 2015, the CSA can expect a further increasing international orientation in 2016 as a service providing quality in email marketing.

Further information:  
[www.certified-senders.eu](http://www.certified-senders.eu)





Peter Meyer  
Project Manager ACDC



## 6.2 Cyber Security Services

### 6.2.1 Anti-Botnet Advisory Center

Again in 2015, botnets represented one of the greatest threats in the area of cyber criminality. A slight reduction in malware-infected computers could be seen in 2015, however, this is the result of the sinking market share of traditional PCs. In contrast, despite a range of awareness-raising measures, 2015 played witness to a strong increase in smartphones and tablets infected with malware.

All of these devices – be it PCs, laptops, smartphones or tablets – are, generally without the knowledge of the owner, part of a botnet, and regularly send spam emails. On the part of the botfrei team, it remains important to work at raising the awareness of users that smartphones

and tablets are fully-fledged computers that also need to be protected by anti-virus software.

In 2015, the various services had well over a million visitors who either made use of the free tools or accessed the expert forum or the blog. The tools and information on encryption Trojans, one of the largest threats for Internet users last year, were of particular interest. In conjunction with the discovery of the Chimera Ransomware, the botfrei team gained worldwide media attention in fall from the entire IT security world.

The spectrum of the free tools made available by botfrei, like the EU Cleaner, was expanded in

2015, and cooperation with other Anti-Botnet Advisory Centers was further developed. In conjunction with the European anti-botnet project Advanced Cyber Defence Center (ACDC), the network of Anti-Botnet Advisory Centers has grown to a total of eleven such free services for end users.

Thanks to the support of the connected ISPs and technology partners, and numerous press reports and links, botfrei.de/en serves as the first port of call in the case of a botnet infection for both a large number of Internet users and small and medium-sized companies, and even also the police ...

The services and support include, along with the telephone and email support, a lively and comprehensive forum in which – with the support of very active forum volunteers – affected users can be given professional help. In addition to this, the free tools for the detection and removal of malware continue to enjoy great popularity.

Further information:  
[www.botfrei.de/en](http://www.botfrei.de/en)  
[www.botfree.eu](http://www.botfree.eu)



Markus Schaffrin  
Head of Member Services  
Project Manager Initiative-S

## 6.2.2 Initiative-S

Initiative-S, a jointly funded project of the eco Association and the German Federal Ministry for the Economy and Energy (BMWi) in conjunction with the initiative "IT Sicherheit in der Wirtschaft" (IT Security in the Economy), was brought to a successful conclusion at the end of 2014. With 50 roadshow events and numerous press publications, it was possible to reach a broad public with Initiative-S, and also to position eco's security activities in the environment of small and medium-sized companies. This was confirmed by the almost 30,000 domains from SMEs registered during the two-year project.

In 2015, Initiative-S was continued under the sole leadership of the eco Association as a Cyber Security Service. Without any additional marketing activities, there was growth in the

registrations, as registered participants act as ambassadors through the Initiative-S seal placed on their websites – making this an excellent tool for awareness-raising.

In addition, last year the scanner technology was improved by adding supplementary components from the ACDC project, which resulted in an improved detection rate. Due to the successful completion of the project and the satisfaction of the funding bodies, Initiative-S has become an important foundation for future projects and cooperative activities between eco and the BUND, and in particular the BMWi. One great advantage has proven to be that eco has demonstrated the ability to continue projects after the end of the funding time and to develop them sustainably.



Initiative-S positions eco more strongly in the SME environment, and shows that cyber security is also an important topic for SMEs, thus contributing to the health of the entire Internet industry. Website operators can continue to have their websites checked for free at [www.initiative-s/en](http://www.initiative-s/en) to see if their online platform is distributing malware or whether a phishing or malware site is being hosted on their domains. In the case of an infection, participating SMEs receive support and advice from the botfrei security experts for the removal of malware from their websites.

Further information:  
[www.initiative-s/en](http://www.initiative-s/en)





Peter Meyer  
Project Manager ACDC



## 6.2.3 Advanced Cyber Defence Centre

### Fighting botnets without borders

The Advanced Cyber Defence Center (ACDC) is a European pilot project with the objective of developing and actively implementing a cross-border concept against the spread of botnets and malware. In a consortium of 28 partners from 14 European states, eco carried the responsibility as project coordinator. The project began in February 2013 and ran officially until July 2015.

The project results were presented to the public at the Internet Security Days 2015 in Brühl, and were approved by an external examiner on behalf of the EU. Here, eco was praised for

both the innovative integration of the closing event of the project in the ISD, and for the outstanding coordination of the project throughout the project term.

Together with renowned partners from the areas of public administration, the Internet industry, operators of critical infrastructure, the financial sector, research and educational institutions, anti-virus vendors, CERTs, and law enforcement agencies, a central data base with open interfaces was taken into operation. External sensors, honeypots, analytical tools and data feeds can be easily integrated into the database. It enables all partners to share information, for example on malware or phishing,

and to analyze this using their own tools. Alongside the cross-industry and cross-border exchange of knowledge, security protection and prevention were important components of the project. As a result, during the term of the project, a further ten Anti-Botnet Support Centers were established that were modelled largely on the longstanding eco service botfrei.de. Continued cooperation after the ending of the official project is being considered, particularly in order to take advantage of the numerous synergies. This includes joint awareness campaigns, cooperation with law enforcement agencies in the context of botnet takedowns, and the cooperation with CERTs. Other synergies include the joint provision of tools and support activities to help affected end users and SMEs in the case of a malware infection.

On top of this, the tools developed during the project are made available free of charge as open source solutions, and now help to optimize the detection technology of Initiative-S, for example. A detailed analysis of the legal foundation for EU-wide exchange of threat



intelligence data today serves many other projects, initiatives, companies and authorities as a basis for future activities in the areas of cross-border data exchange. The access point for the project and further activities is the ACDC community, where numerous white papers are deposited.

Further information:  
[www.acdc-project.eu](http://www.acdc-project.eu)  
[www.botfrei.eu](http://www.botfrei.eu)



*Arnold Nipper*  
CTO/COO, DE-CIX



*Andreas Sturm*  
Head of Business Development, DE-CIX



## 6.3 DE-CIX Management GmbH

2015 is a special year for DE-CIX: It marks the 20th anniversary and was also the year of national and international expansion. DE-CIX connects hundreds of content networks, carriers and ISPs at Internet hubs in Germany, Europe, the Near East, and North America.

In 2014, DE-CIX operated five national and international Internet hubs. In 2015, DE-CIX opened three new locations in Marseille, Palermo and Istanbul, and announced two further exchanges in Dallas and Dusseldorf. This doubles the number of Internet hubs operated by DE-CIX to ten worldwide.

### Locations in Germany

The DE-CIX Internet exchanges in Germany are operated by DE-CIX Management GmbH. 2015 was another successful year for the locations in Frankfurt, Hamburg and Munich: Over 100 new customers were connected, the majority of these in Frankfurt.

The total capacity of all connected customer ports in Frankfurt reached 19 Terabits, a growth of 48 percent. The data traffic, which rose in parallel with the growth in ports, meant that the DE-CIX Frankfurt exchange point achieved the record peak of more than 5 Terabits per second in its anniversary year, up 45 percent from the previous year. In December 2015, the opening of the fourth German location in Dusseldorf was announced.

### International business

DE-CIX International AG, a subsidiary of eco, is responsible for the DE-CIX's business outside of Germany. It can be seen world-wide that the large data streams and the associated technical

infrastructure is branching out more and more and becoming more regional. DE-CIX makes use of 20 years of experience and uses their know-how and expertise to meet the demand and establish new Internet exchanges.

### North America

The largest international location is DE-CIX New York. Established in 2013, the hub has developed into the fastest-growing Internet hub in the entire region. More than 60 new customers connected to the exchange during 2015, more than doubling the customer numbers. DE-CIX New York is distributed over a range of data centers in the New York / New Jersey region and accessible via over 100 access points. The

second North American exchange, DE-CIX Dallas, was announced in 2015. DE-CIX New York, and DE-CIX Dallas are operated by DE-CIX North America, a subsidiary of DE-CIX International AG.

### The Near East

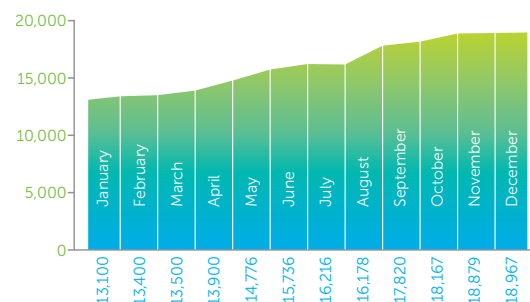
The Internet exchange UAE-IX, established in Dubai in 2012, is operated with the know-how and the support of DE-CIX Management GmbH. In 2015, nearly 20 new customers connected to the exchange, in particular companies that offer local content. This further strengthens the importance of UAE-IX as a regional Internet hub for the GCC region.

### Europe

With Marseille and Palermo, two new Internet exchange points were opened in Europe. The hubs were taken live in September and October, and the first customers are already connected. The locations Marseille and Palermo are both connected to data traffic from Asia, the Near East and Africa via a range of undersea cables. This offers content providers and ISPs the possibility to connect directly to the cable landing stations in a politically and socio-economically stable environment.

Turkey is a constantly growing market with many land cable connections and several under-sea cable landing stations. DE-CIX Istanbul, taken operational in December 2015, will in future

### DE-CIX Connected Capacity (Gbit/s) 2015

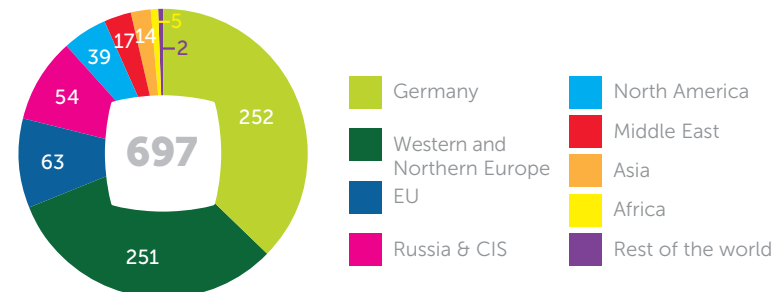


also be accessible from the cities Ankara, Bursa and Izmir, to become the central exchange point for data traffic for providers from the Caucasus and the Near East. DE-CIX Istanbul is operated by DE-CIX Istanbul Network Connections LLC, a subsidiary of DE-CIX International AG.

### 20 Years DE-CIX in Frankfurt

In 1995, three German ISPs, EUnet Deutschland, NTG/Xlink and MAZ, connected their networks together for the first time – and this was the birth of DE-CIX. What began with the connection of three Internet Service Providers 20 years ago is today the Internet exchange point with the highest data throughput in the world. We are proud of this success! In the anniversary year, this was crowned with the renowned Capacity Award as the Best Internet Exchange.

### DE-CIX Customers by Region 2015



### The Peering Community

DE-CIX is successful because it supports companies in building their peering and in getting greatest possible benefit from it. Supporting the community to meet and get in contact is an important part of this. DE-CIX organizes and supports many national and international events every year. Events like the Global and European Peering Forum, Capacity Europe, Capacity Middle East and Capacity Russia, the ITW in Chicago, and RIPE, NANOG, ENOG, DENOG and MENOG are supported and serve as a point to meet and exchange knowledge and ideas. The absolute highpoint of the year 2015 was the 20th Anniversary Birthday Dinner in Frankfurt, and the DE-CIX Customer Summit the following day, which took place in parallel in Frankfurt and Istanbul.

### Outlook

DE-CIX looks back at an outstandingly successful history, and transfers this success at the national and international level to new locations. There is no end in sight for the growth in data and the success story of the Internet exchange points operated by DE-CIX will continue to be written – in Germany and around the world.

Further information:  
[www.de-cix.net](http://www.de-cix.net)





*DE-CIX International AG – Supervisory Board*  
*Felix Höger*  
*eco Director Online Services/Cloud Computing*

*Klaus Landefeld*  
*eco Director Infrastructure & Networks*

*Rudolf van Megen*  
*CEO, S.T.O.L. Verwaltung GmbH*

## 6.4 DE-CIX International AG

### DE-CIX International: Further expansion of international connectivity

In 2015, DE-CIX can rightly look back with pride on the impressive achievements in the last 20 years. DE-CIX Frankfurt now stands worldwide as an extremely successful German model for the professional management of international data traffic.

This is the case in particular in connection with the new global network infrastructure challenges which are being faced in every region on the planet as a result of the complete digitalization of society and industry and the associated exponentially growing data volumes. It can be seen worldwide that the data streams in the

Internet and the required technical infrastructure is branching out more and more regionally in order to connect more directly to growing target markets. Data and content is moving ever closer to the edge to enable shorter transport routes, resulting in better transmission performance and an even better user experience.

### Marseille, Palermo, Istanbul: New regional hotspots

Against this backdrop, DE-CIX International AG also furthered its business activities and through the establishment of new interconnection platforms in Marseille (France), Palermo (Italy) and Istanbul (Turkey), secured strategic access to further hotspots of

international connectivity. All three locations are important hotspots for international network operators and content providers, as well as being central landing stations for a range of terrestrial and submarine cable systems for telecommunication and Internet traffic. The new DE-CIX Internet exchanges are set to increase the peering possibilities in the Mediterranean region, and distribute Internet traffic regionally, thus enabling shorter data paths to Africa, the Caucasus, Iran, and the Near East. Turkey, in particular, already has at its disposal a very large Internet ecosystem of around 470 Internet service providers, and, with 25 percent annual traffic growth, is one of the fastest growing regions in the world.

### Large new customers right from the start

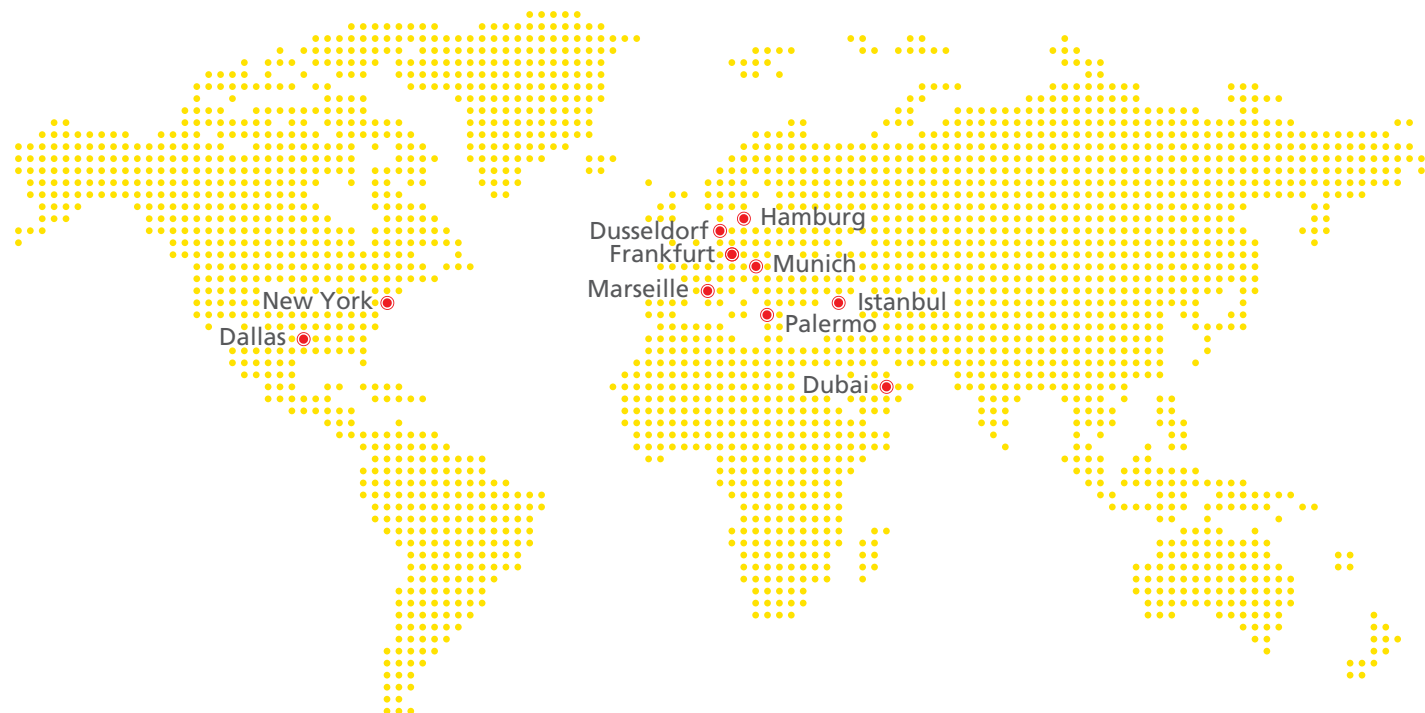
As a result, DE-CIX has been able to secure the first partners in the new geolocations, even though the sites were only started in September 2015. By the end of 2015, DE-CIX Istanbul had seven, DE-CIX Marseille four and DE-CIX Palermo two partner agreements, including well-known new customers with especially high data volumes, such as Turkcell Superonline and Netflix Streaming. DE-CIX Services Istanbul will also be available in Ankara, Izmir and Bursa in the near future, bringing the service to further urban centers in Turkey.

## DE-CIX New York and Dubai enjoy record growth

2015 was also a time of rapid growth at the peering points in New York and Dubai. In both locations, the number of participants almost doubled: the UAE-IX in Dubai is by now one of the most important interconnection platforms in the Arabic region, with close to 50 network operators and content providers. DE-CIX North America, with more than 100 customers, is one of the Top 3 Internet exchanges in the digital world capital New York. In addition to this, it was also possible to expand the service offer for connected customers. A new service in the customer portal now offers them, for instance, detailed visual analyses and statistics for the data traffic at the respective peering point.

## DE-CIX Dallas: Customers lining up

As the leading Internet nation and the impulse generator for the digital revolution, the United States is in the focus for further DE-CIX International expansion plans in 2016. A new interconnection platform in Dallas, Texas will support and map the data traffic in the southern USA in future, but also, in particular, the increasing Internet traffic in the growth regions Mexico and Latin America. The first large telecommunications and Internet providers, such as the network operator IX Reach, have signed cooperation agreements with DE-CIX Dallas just in the last few weeks.



## 2016: Actively driving worldwide peering activities

In addition to this, further IX locations in Europe and around the world are being evaluated and will add further peering hubs to the DE-CIX location map throughout the current year.

As a sponsor, participant and organizer of many specialist conferences and information events, DE-CIX International AG wishes to continue to closely accompany current developments in 2016 and sees itself as an important patron of and key expert for the peering industry. We were thoroughly delighted to receive the distinction of the renowned Capacity

Award 2015 last year, which has motivated us to continue to actively support and drive the further development of our sector.



*Andreas Weiss*

*Director EuroCloud Deutschland\_eco e.V.*

*Peter Koller*

*Project Manager EuroCloud Deutschland\_eco e.V.*



## 6.5 EuroCloud Deutschland\_eco e.V.

Acceptance and trust in all business transactions are key to prosperous economic development. Cloud services permeate and support these transactions. They offer the chance of increased transparency of legally and commercially relevant transactions and makes them to a large extent more trackable – also for small and medium-sized companies – than was even imaginable back in the days of Excel, Word and on-premise software solutions. EuroCloud Deutschland\_eco sees itself as the shaper and promoter of this process at the European level, and supported the competitiveness of German companies in most key areas in 2015,

with many results from projects like CloudingSMEs and Trusted Cloud.

The export nation Germany is here of particular relevance, as the company landscape of SMEs is active in all world markets. For this reason, Germany is a leader in areas like Internet security, data protection, and service protection. Today, German companies expect that Germany's digital standards are complied with throughout the world. The EuroCloud Star Audit is garnering interest as far away as the Asian region. With this, EuroCloud has created a foundation which, in 2015, achieved high political recognition in Germany and in Europe, for example, with the visit of Günther Oettinger, the EU Commissioner for the Digital Econo-

my and Society, to the eco offices in November.

It was important in 2015 to continue to focus on the benefits that cloud services offer SMEs, in order to lay a foundation. Important steps on this path included agreements with the German Federal Office for Information Security, with DIVSI, and with other important players. EuroCloud sees Cloud Services as the fundamental basis for the strategically important topics for SMEs in the area of the integration of Internet services (Industry 4.0). Even though EuroCloud is not directly involved in the area of Big Data Analytics, their activities are shaped by the awareness that this type of analysis of unstructured data should only be

undertaken with computing capacity that is virtualized and very secure: security not only for access, but also in the formulation of the algorithms.

In the global and digital world, members of EuroCloud offer the prerequisites to transfer the high speed of innovation in the IT sector to every other sector. The association campaigns for this, also with continual collaboration on legal and technical framework conditions at the national and international levels, in order to develop these further and harmonize them.

The association supports providers and users of cloud services with their numerous questions on security, law and compliance, encour-



ages innovations for all fields of business and areas of life on the basis of cloud platforms, and supports startups in the implementation of creative ideas. Behind this is the understanding that, today, an innovation – with the exception of the very few, really disruptive new breakthroughs – will mean the integration, combination and adaptation of existing, previously independent, applications and data sources on one platform. For this reason, the belief that PaaS can provide competencies and offer technology that makes innovations more efficient gained ground in 2015. The forward-looking engagement in the Competence Network Trusted Cloud e.V., which was founded in June 2015 by the German Federal Ministry for Economic Affairs and Energy (BMWi)

together with other leading IT associations, and is supported by the rich foundation of the action program Trusted Cloud, also goes in this direction. Below is an overview of projects by and with EuroCloud Deutschland\_eco in the year 2015.

### EuroCloud Projects

Clouding SMEs  
[www.cloudingsmes.eu](http://www.cloudingsmes.eu)

The EU-funded project Clouding SMEs was successfully completed in October, with the submission of the final report. Clouding SMEs was a joint initiative of SME associations and SME and Cloud computing experts that act as

catalysts to support the successful implementation of Cloud computing for European SMEs.

EuroCloud Deutschland is a founding member of the non-profit association Competence Network Trusted Cloud e.V., founded in June 2015, and is represented on the board by Thomas von Bülow (Board Spokesman for EuroCloud Deutschland). One main objective is the development of a platform for the listing of trustworthy cloud services on the basis of a catalog of criteria. The criteria include all minimum requirements for transparency, security quality, and legal conformity that are necessary for trustworthy cloud services. A balanced approach to questions of quality in the cloud area helps the entire economy in further mod-

ernization. Dr. Jens Eckhard (Board Member for Law at EuroCloud Deutschland) was instrumental in the development of the guidelines "Datenschutz und Cloud" for the topic of data protection in the cloud.

NGCert  
[www.ngcert.eu](http://www.ngcert.eu)

The work in the joint project NGCert (Next Generation Certification) continued intensively in 2015. This is part of the topic area "Secure Cloud Computing" in conjunction with the German Federal Government's high-tech strategy. The objective of the project Next Generation Certification (NGCert) is to develop fundamental processes for a dynamic



certification, which should ensure that all quality and security requirements of the certificate are being met at all times. The continual proof of compliance to the certification criteria is thus also given by the implementation of new technical features and by security updates.

EuroCloud Cloud Privacy Check  
[www.cloudprivacycheck.eu](http://www.cloudprivacycheck.eu)

The (apparent) lack of clarity regarding data protection law has proven to be a barrier to the use of cloud services. Under the leadership of EuroCloud Austria and with the involvement of Dr. Jens Eckhard (Board Member for Law at EuroCloud Deutschland), an international tool

for legally certain solutions to data protection requirements for cloud computing has been developed. The Cloud Privacy Check (CPC) simplifies the assessment of data protection compliance to the four decisive questions in the use of cloud services, without curtailing legal accuracy. Through the emphasis on the four core questions, the barrier is reduced, in that the assessment of the use of cloud services is simplified. Based on these core questions, the instruments for legally compliant formation are presented, as the "CPC Legal Toolbox". This makes it possible for providers to check if their service meets the requirements, and for users to assess a cloud service. The CPC also shows that these questions are similar in all of the countries involved. This simplifies cross-border

cloud services in particular. The CPC is available for over 30 countries and takes national characteristics into account.

Further information:  
[www.eurocloud.de](http://www.eurocloud.de)





Christiane Skiba  
Branch Manager Cologne  
Head of Marketing & Events



## 7. Event Highlights 2015

### 7.1 eco Gala 2015

25 years Internet – 20 years eco –  
15 years eco Gala

The eco gala is the most exclusive event in the Internet industry calendar, and has been for many years. The more than 400 guests joined eco for 25 years of the Internet, 20 years of eco and 15 years of the eco Gala and the eco Internet Award – a magnificent birthday celebration in The New Yorker hotel in Cologne.

More information, videos and photos under:  
<https://awards.eco.de/en/gala.html>



These solutions convinced the eco Internet Award jury with their creativity, strength of innovation, quality and market potential:

- Category Applications
  - Mobile/M2M pixolus GmbH with "pixometer"
  - Unified Communications AhoyRTC GmbH with "AhoyUC"
- Category Content
  - Games Kaasa Health GmbH with "Meister Cody – Talasia"
  - Streaming Media Rushlake Media GmbH with "Kino on Demand"
- Category E-Business
  - E-Commerce Webdata Solutions GmbH with "blackbee"
  - E-Mail-Marketing artegic AG with "ELAINE Real Time Marketing Automation"
  - Online-Marketing Rocket-Fuel with media purchasing with artificial intelligence
- Category Infrastructure
  - Data Center/Hosting/Housing Excool GmbH with "Excool Space – the efficient, modular data center"
  - Domains Public Interest Registry with "OnGood"
  - Networks NTT Communications with their "cloud networking service with self-service immediate activation"
- Category New Work TalentFrogs GmbH with "the first employer application"
- Category Security Pallas GmbH with "PASA"
- Category Internet-Start-up ampido GmbH with "ampido – intelligent resource management"
- EuroCloud Deutschland Award "Best Cloud Service for Horizontal Markets" DALASON GmbH with "WIRECLOUD"
- Special prize of the State of North Rhine-Westphalia for the Digital Economy Picanova GmbH









## 7.2 The New Year's Reception, Cologne

### "Smarter" New Year's Reception, Cologne

With more than 300 registrations, eco's Cologne office was more than full for the New Year's reception. This year, the tasty tapas, great music and the very best of networking opportunities were accompanied by the exhibition "Technology meets interior design", which gave a taste of the Smart living room of the future.

The party-goers were particularly interested in the Smart home exhibit "SmartEden", which steers everyday objects with radio and sensor technology and builds a bridge between the physical world and the digital sphere. The majority of visitors were convinced that the further development of the "Internet of Things" is unstoppable.





## 7.3 it-sa 2015 – IT Security Fair and Congress

### Live Hacking and Cyber Security Panel – eco on location

From 6 to 8 October, eco was present at the it-sa in Nuremberg with a stand. The IT security fair is one of the biggest in the world with around 9,000 visitors from 34 countries. A highlight of the 2015 fair was the keynote speech by the NSA whistleblower Edward Snowden, given as a live broadcast. He spoke about possible solutions for fighting mass surveillance by state bodies.

According to a visitor survey, most were interested in the topic groups data and network security. eco's Markus Schaffrin, Head of Member Services, spoke on a panel on the topic "Cyber security – a snapshot of the nation and Windows 10." At the eco stand, the eco team addressed various aspects of cyber security and gave background information and suggested defense mechanisms. eco experts showed in a live hacking demonstration how easily security measures can be passed by in order to infect computers with malware.

With the team's presence at the it-sa and the many interesting talks at the stand with current and potential members, the association was able to raise its profile and make many new contacts. In addition, a good number of questionnaires for the current eco Security Study were completed and collected.





## 7.4 Internet Security Days 2015: No Freedom Without Security

From 16-17 September, the Internet Security Days took place in Phantasialand in Bruehl for the fifth time. Around 600 professionals from numerous countries used the chance to further their education, to network and to work together on the IT solutions for the IT threats of tomorrow. The Phantasialand fun fair was again a colorful setting for talks, keynote speeches, panels and networking events. Interested specialist visitors, excellent exhibitors, strong media partners, and top-class sponsors all contributed to a successful event.

In his opening speech, Prof. Michael Rotert, Chair of the eco Board, commented that there is no freedom without security. Avira's Sean Obrey gave insights into fighting viruses in his keynote speech "Straight from the labs." Tim Cole posed the question of whether Germany has fallen behind in the digital transformation and called for more courage to innovate: "We need to protect information, not systems."

Two tracks focused on current challenges in IT security; "The Internet of tomorrow" and "Regulated IT security – curse or blessing?" In the afternoon, a further two tracks addressed recent developments, like the car hack in the

USA and Industry 4.0: "My network is my castle" and "Connected world."

The next day started with a keynote speech given by Thomas Uhleman of ESET Germany calling on developers to think of security from day one. Martin Mühlbeck of the European Commission presented the European Cyber Security Strategy. The morning tracks were on "The war for data" and "The measured man" and ACDC's team gave an overview of the topic "Europe fighting botnets."

In the afternoon, attention turned to data privacy in the cloud. The second day concluded

with a special on physical data security and the talk "Dynamic keys for the Internet of Things." Overall, the ISDs again showed how an event combining trade fair, congress and networking in an exclusive location offers the best of all three formats and is an ideal setting for learning, exchange and business.

The Internet Security Days will continue in 2016 on 22 and 23 September, again in Phantasialand in Brühl, near Cologne.

Further information under:  
<https://isd.eco.de>



Thomas Müller  
Head of Corporate Communications

## 8. Corporate Communication

### Successful association communication

The communication in 2015 was above all influenced by the eco anniversary: For the 20th birthday celebrations, eco documented the milestones of Internet history in a timeline on the eco website. There was considerable attention as a result of publications in the form of press releases, articles in newsletters and social media posts.

### Study achieves wide distribution

The new edition of the study on the future of the German Internet industry was published in late 2015 by eco together with Arthur D. Little. The German version achieved considerable media attention. The English translation "The German Internet Industry 2016 – 2019" was published in early 2016.

A further focus was security topics. The IT Security Report from the eco Competence Group Security, and a range of press releases, warnings and tips from botfrei.de also achieved media attention. Added to this, increased reporting of the activities of the CSA and EuroCloud Deutschland\_eco led to

further media activities for the association.

### Strengthening of the team

With Kathrin Jennewein as PR trainee, the Corporate Communication team received further strengthening. She brings additional knowledge in the area of social media with her; her master's thesis dealt with blogger relations and the possibilities of social media. eco has channels through Facebook, Twitter, YouTube, LinkedIn, and Xing, which are closely tied to the communication activities of the association.

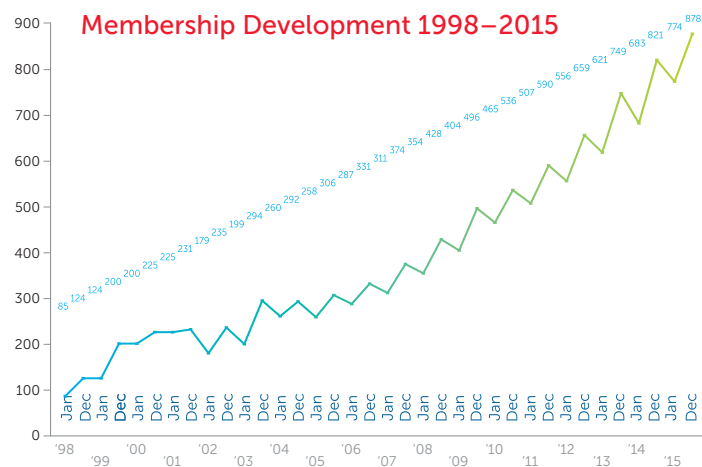


The complete study is available free of charge to download:

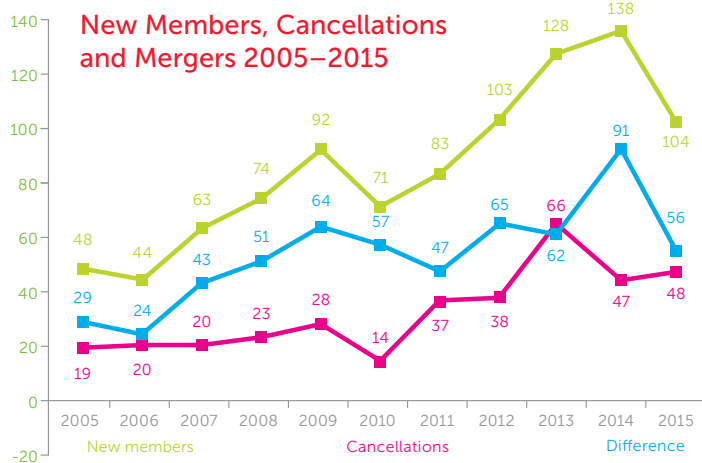
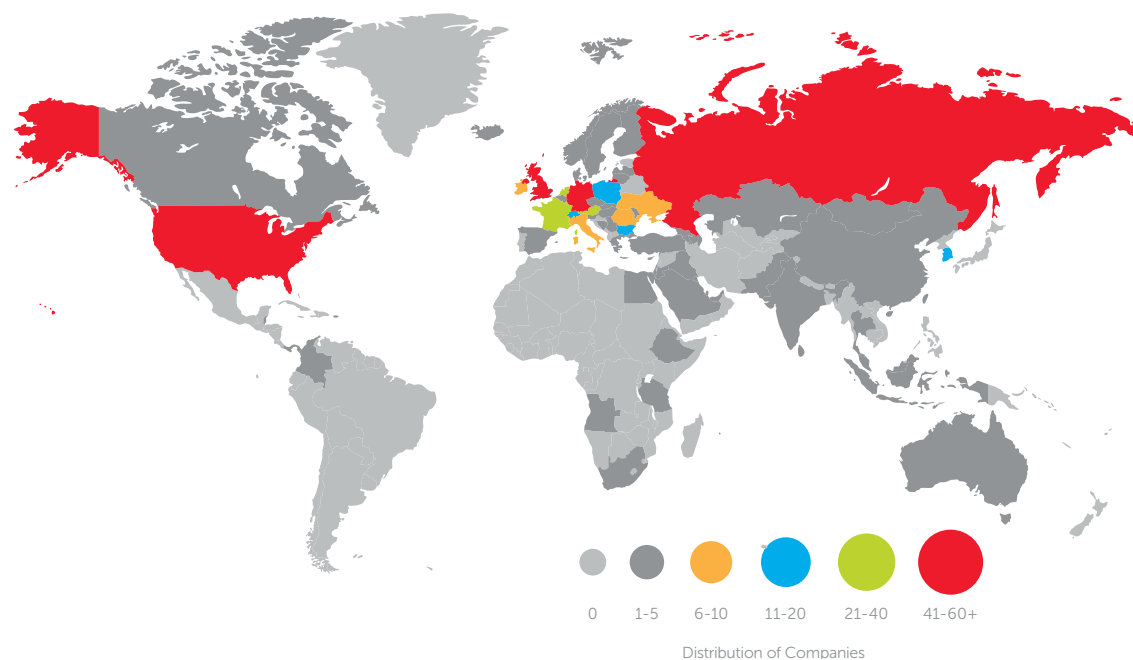
<https://international.eco.de/2016/news/the-german-internet-industry-2016-2019.html>

## 9. Statistics

### 9.1 eco Members

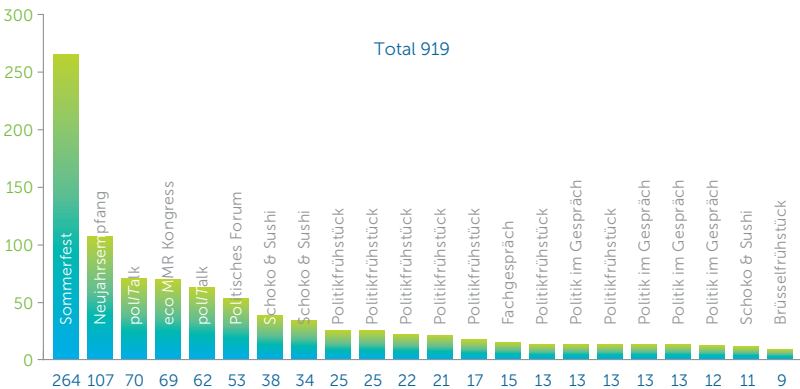


**Headquarters of eco Member Companies 2015**

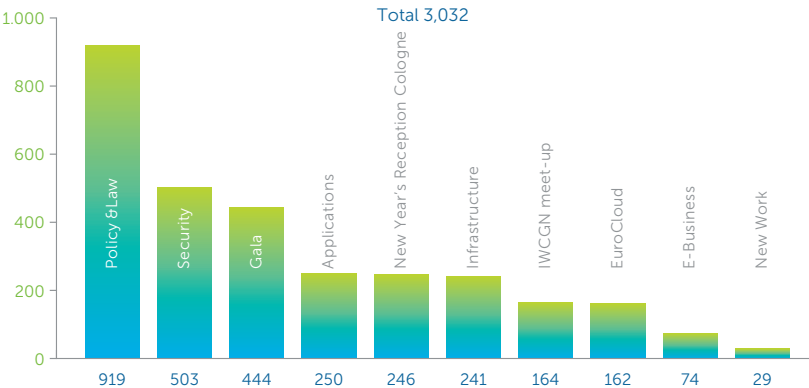


9.2 Events

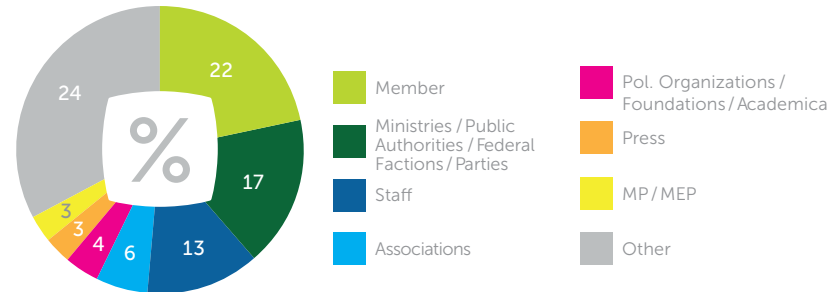
Policy & Law Participants and Events 2015



Participants at eco Events by Topic 2015

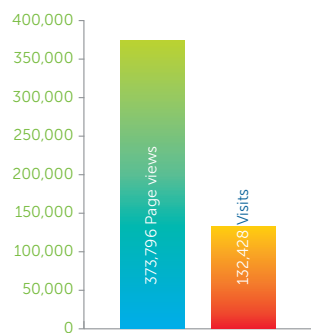


Participants at Policy & Law Events by Function

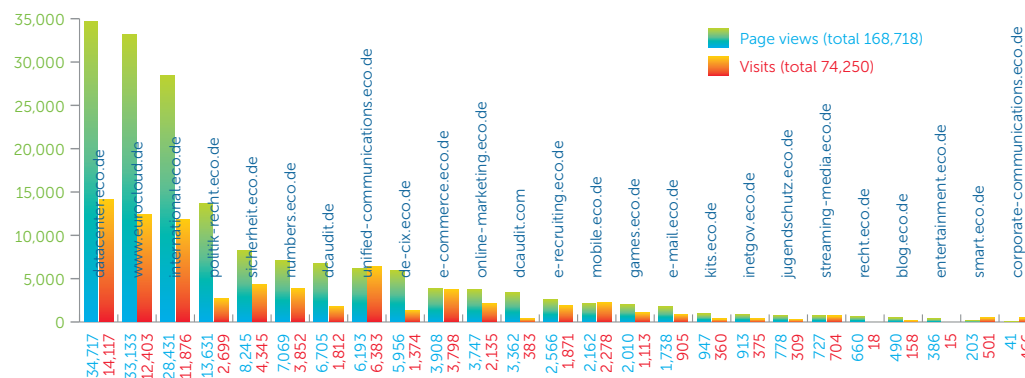


## 9.3 eco Websites

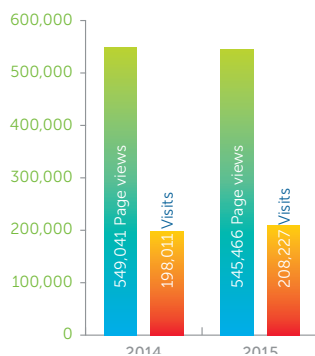
Visits to www.eco.de 2015



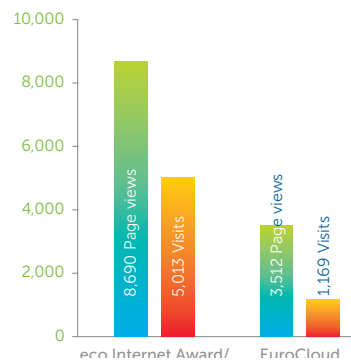
Competence Groups and Topics, Visits to Landing Pages 2015



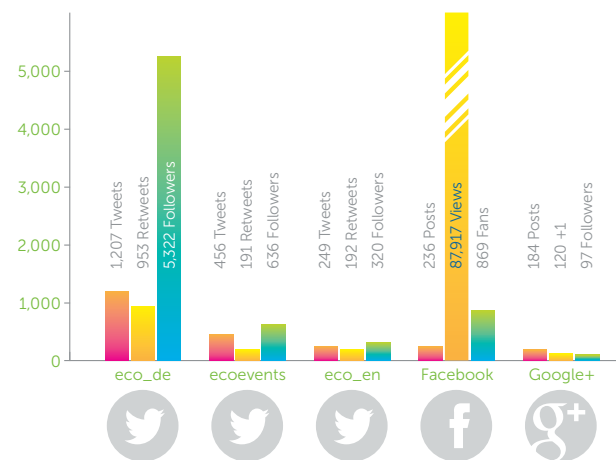
Visits to all eco Websites



Visits to Event Microsites 2015



eco in Social Media 2015

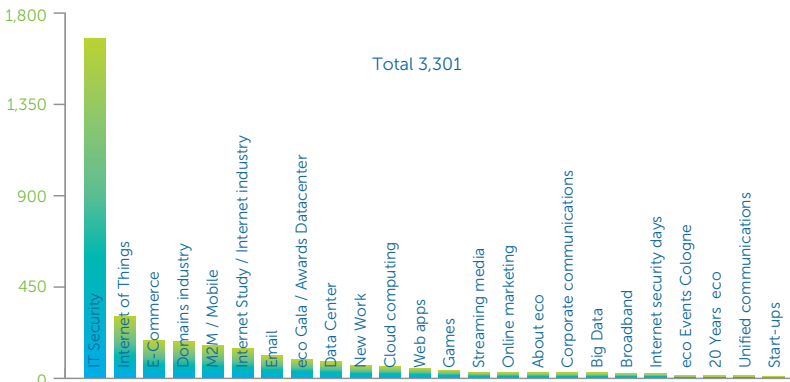


9.4 Press

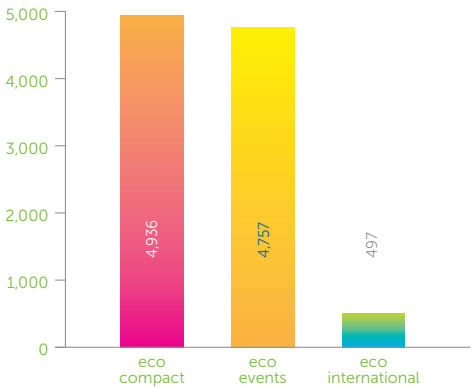
Press Publications  
eco Topics 2015  
(Print and Online)



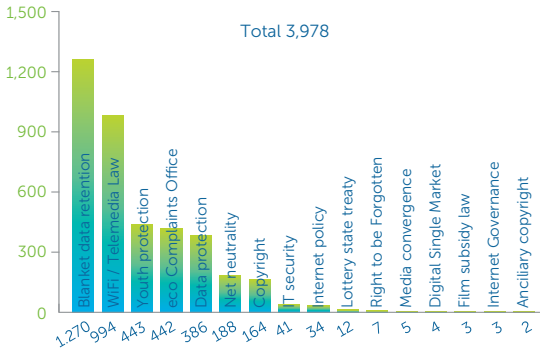
Press Publications  
Internet Industry (Print and Online)



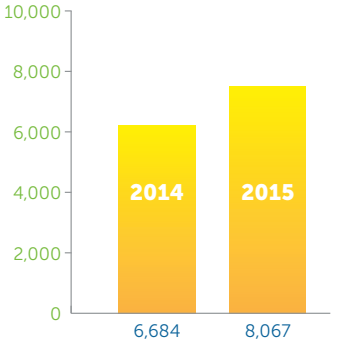
eco Newsletter Subscribers 2015



Press Publications  
Policy & Law (Print and Online)



Press Publications  
eco total (Print and Online)





BILD, 20 November 2015  
eco Association warns of subscription traps  
Emojis



WDR Aktuelle Stunde, 21 March 2015  
Markus Schaffrin on Social Bots



Die Welt, 20 August 2015  
Virus warning, mention of botfrei.de



Zeit Online, 17 November 2015  
Study: Internet to grow by 60 percent by 2019



com! professional, 1 May 2015  
Interview with Andreas Weiss:  
Cloud only functions internationally



Focus, 22 April 2015  
Prof. Hofmann on E-Commerce: how car  
dealerships can survive extinction

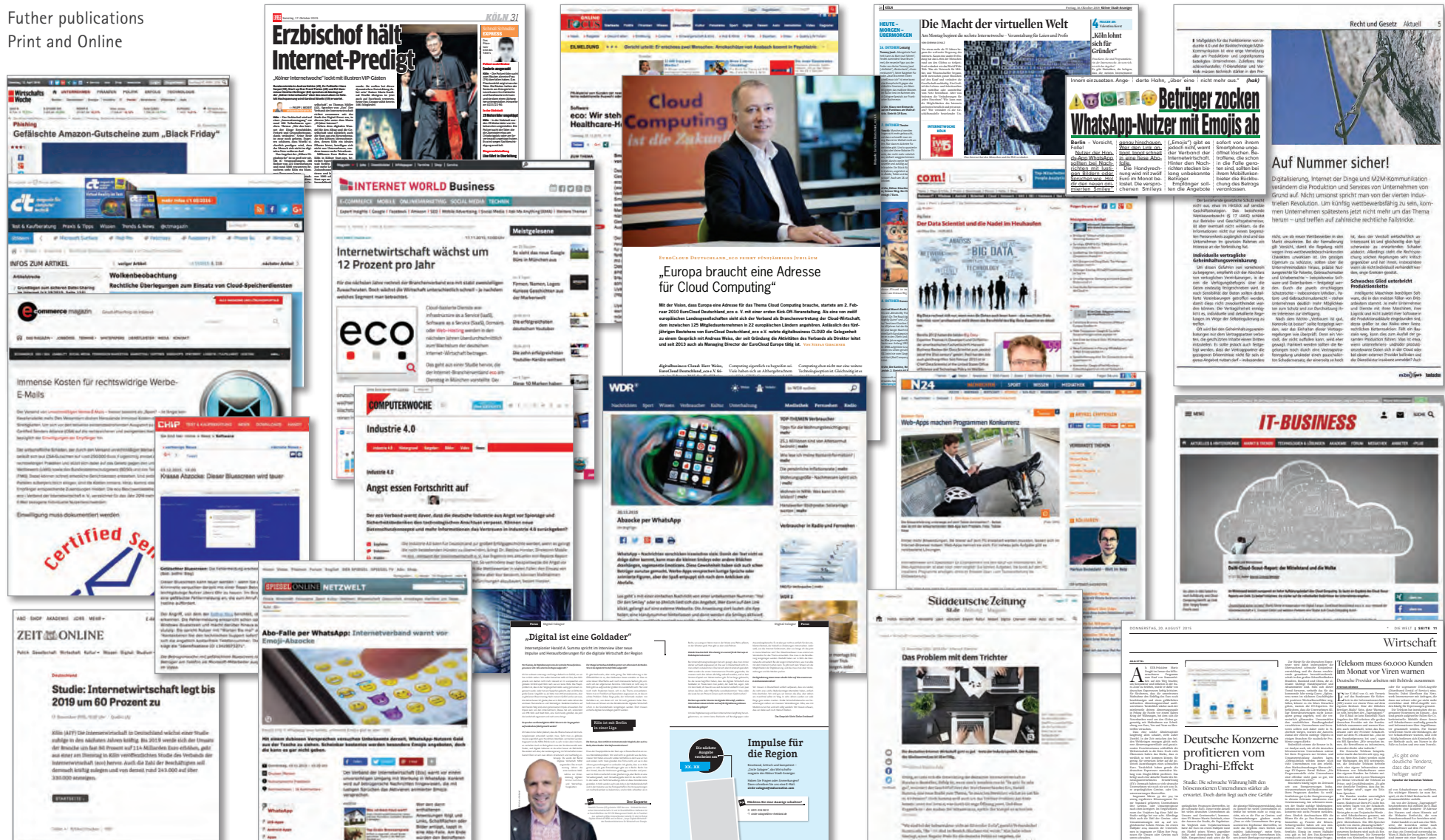


Handelsblatt, 03 March 2015  
Botfrei annual statistics



Süddeutsche Zeitung, 17 November 2015  
Interview with Harald A. Summa

Further publications  
Print and Online



eco Websites

Newsletter eco compact

eco E-Mail-Invitations

eco Podcast

Newsletter eco events

eco Blogs

Newsletter eco International

Newsletter eco Inside



## 9.5 eco Media

eco took advantage of its birthday year to strategically orient, extend, and make more targeted its broad range of communication channels. This affected firstly the newsletters: alongside "eco compact" and "eco events", the international newsletter offers were expanded. Since April, "eco Inside", on current developments in the German market for international readers, is published in fortnightly alternation with the more internationally oriented "eco International". The eco Capital Office introduced two new newsletters, "eco Politik & Recht" and "eco politik". The printed "Politikbrief" is sent by post to members and certain externals.

The eco Podcasts, which have been appearing regularly since 2006, were newly conceived and relaunched as the "eco Audiomagazin", produced regularly in German and occasionally in English. Regular podcast interviews are available in English with experts from the Internet industry on the eco International podcast page.

The Social Media Strategy sets out how in future the channels are to be serviced in a more targeted manner. In the twitter channels @eco\_DE and @eco\_EN, news from the association and from the Internet industry is delivered throughout the day. The Facebook page offers news and insight into the association, and the Xing group enables discussions and

offers information on events. The agency FRESH INFO +++ is responsible for the German "eco Audiomagazin" and most social media channels (<http://fresh-info.agency>).



## Links

## Home

- [www.eco.de](http://www.eco.de)
- <https://international.eco.de>

## Networking

- [www.facebook.com/ecoassociation](https://www.facebook.com/ecoassociation)
- [www.xing.com/net/ecoassociation](https://www.xing.com/net/ecoassociation)
- <https://www.linkedin.com/groups/4164472>

## Twitter

- [www.twitter.com/eco\\_en](https://www.twitter.com/eco_en)
- [www.twitter.com/DCStarAudit](https://www.twitter.com/DCStarAudit)
- [www.twitter.com/EuroCloud\\_DE](https://www.twitter.com/EuroCloud_DE)

## Photos

- [www.flickr.com/ecoenv](https://www.flickr.com/ecoenv)

## YouTube

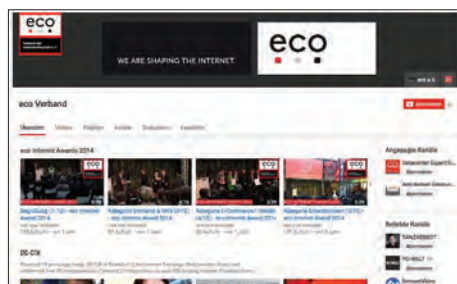
- [www.youtube.com/ecoAssociation](https://www.youtube.com/ecoAssociation)
- [www.youtube.com/eurocloud](https://www.youtube.com/eurocloud)
- [www.youtube.com/DatacenterStarAudit](https://www.youtube.com/DatacenterStarAudit)

## Podcast

- [international.eco.de/podcasts.html](http://international.eco.de/podcasts.html)

## Newsletter

- [international.eco.de/newsletter.html](http://international.eco.de/newsletter.html)



eco politik newsletter

eco Politik &amp; Recht newsletter

eco Twitter Account

eco Facebook Account

eco YouTube-channel

eco Google+ Account

eco Politikbrief print newsletter

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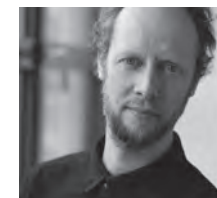
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NETWORKING&CLOUD LTD., London, GBR; Filanco Europe Ltd. Citytelecom, London, GBR; Filiago GmbH & Co. KG, Bad Segeberg; Filoo GmbH, Gütersloh; Finanz Informatik Technologie Service GmbH & Co. KG, Haar; FireEye GmbH, München; First Colo GmbH, München; Forcepoint, Unterföhring; Formware GmbH, Nußdorf am Inn; Fortex JSC, Moscow, RUS; FORTHnet S.A., Athens, GRC; Foton Telecom CJSC, Moscow, RUS; Fredonia Trading Ltd., Limassol, CYP; FREE S.A.S., Paris, FRA; freenet AG, Kiel; FreiNet GmbH, Freiburg; FRESH INFO +++, Hennef; Frey - International Business Consulting, Heusweiler; FRITZ & MACZIOL GmbH, Ulm; Fujitsu Enabling Software Technology GmbH, München **[G]** G DATA Software AG, Bochum; GAME Bundesverband der deutschen Games-Branche e.V., Berlin; Gameforge 4D GmbH, Karlsruhe; Gandi SAS, Paris, FRA; GBI HQ Coöperatief UA, Amsterdam, NLD; GCN - Global Communication Net, Sofia, BGR; GELSEN-NET Kommunikationsgesellschaft mbH, Gelsenkirchen; Gemnet LLC, Ulaanbaatar, MNG; Gesellschaft für kommunalen Einkauf mbH, Pulheim; getit - Gesellschaft für Technologie- und Informationstransfer mbH, Dortmund; G-FIT Gesellschaft für innovative Telekommunikationsdienste mbH & Co. KG, Regensburg; GFN Glasfasernetz Olfen GmbH, Olfen; Global Access Internet Services GmbH, München; Global Cloud xChange, Dublin, IRL; Global Switch FM GmbH, Frankfurt am Main; GlobalConnect A/S, Taastrup, DNK; GlobalNet JSC, St. Petersburg, RUS; GLOBE Development GmbH, Münster; GNC-Alfa CJSC, Abovyan, RA; Golden Telecom Ltd., Washington, USA; Google Germany GmbH, Hamburg; GRASS Consulting, Appen; GRASS-MERKUR GmbH & Co. KG, Hannover; Grupa Allegro Sp. z o.o. allegro, Poznań, POL; Gulfnet Communications Co, Mubarakia, KWT **[H]** Hamburg Top-Level-Domain GmbH, Hamburg; HARTMANS A.G., Belize City, BZ; Hasso Plattner Institut für Softwaresystemtechnik GmbH, Potsdam; Heidelberg iT Management GmbH & Co. KG, Heidelberg; HeLi NET - Telekommunikation GmbH & Co. KG, Hamm; Henkelhausen GmbH & Co. KG, Krefeld; HERE Global B.V., Veldhoven, NLD; HessenKom GmbH & Co. KG, Albstadt; Hetzner Online GmbH, Gunzenhausen; Heuking Kühn Lüer Wojtek, Köln; Hewlett-Packard GmbH, Böblingen; HEXONET GmbH, Homburg; Hibernia Netherlands BV / Atrato IP, Schiphol-Rijk, NLD; Highwinds Network Group Inc., MK Haarlem, NLD; Hivane, Paris, FRA; Hive Streaming AB, Stockholm, SWE; HKN GmbH, Krefeld; HL komm Telekommunikations GmbH, Leipzig; Hofmeir Media GmbH, München; Hofniet IT und Services GmbH, Berlin; Höger Management GmbH, Bornheim; Hornetsecurity GmbH, Hannover; Horst Götz Institut Ruhr Uni Bochum Zentrum f. Sicherheit i.d. Informations- technik, Bochum; Host Europe GmbH, Köln; Host Virtual Inc., Santa Monica, USA; Hostkey B.V., Amsterdam, NLD;

Hostserver GmbH, Marburg; Hostway Deutschland GmbH, Hannover; HOT-NET Internet Services Ltd., Kibbutz Yakum, ISR; hotze.com GmbH, Innsbruck, AUT; Hoval Aktiengesellschaft, Vaduz, LIE; HRS - Hotel Reservation Service Robert Ragge GmbH, Köln; HSE MediaNet GmbH, Darmstadt; htp GmbH, Hannover; http.net Internet GmbH, Berlin; HUAWEI TECHNOLOGIES Deutschland GmbH, Düsseldorf; Huawei Technologies Düsseldorf GmbH, Düsseldorf; Hub Network Services Limited, Bristol, GBR; Hurricane Electric Int. Service, Fremont, USA **[I]** I.T.E.N.O.S. GmbH, Bonn; I/P/B/ Internet Provider in Berlin GmbH, Berlin; i3D.net B.V., Rotterdam, NLD; IBH IT-Service GmbH, Dresden; ICB GmbH, München; Idear4business Ltd., Sheffield, GBR; IDKOM Networks GmbH, Kempten; IDNET LTD, Hitchin, GBR; IDNT Europe GmbH, Linden; IfKom - Ingenieure für Kommunikation e.V., Bonn; Iguane Solutions SAS, Paris, FRA; IHK Gesellschaft für Informationsverarbeitung mbH, Dortmund; ILX Network Inc., Santa Clara, USA; IKB Innsbrucker Kommunalbetriebe AG, Innsbruck, AUT; ILK Internet GmbH, Karlsruhe; Incapsula Inc., Redwood Shores, CA, USA; INEXIO KGaA, Saarbrücken, INFINITY TELECOM SRL, Bucuresti, ROU; Infomex Sp. z o.o., Zyrardow, PL; INFOnline GmbH Forum Bonn Nord, Bonn; Inforent GmbH, Frankfurt am Main; Infotecs Internet Security Software GmbH, Berlin; Ingenico e-Commerce Solutions SPRL/BVBA, Brussel/ Bruxelles, BEL; ingenit GmbH & Co. KG, Dortmund; Ingram Micro Distribution GmbH, Dornach; Init7 (Schweiz) AG, Winterthur, CHE; Institut für Internet-Sicherheit - if(is) FH Gelsenkirchen Fachbereich Informatik, Gelsenkirchen; Integra Telecom Inc, Portland, USA; Interactive Network Communications GmbH, Frankfurt am Main; InterCloud S.A.S., Paris, FRA; INTERNATIONAL BUSINESS GROUP Chunghwa Telecom Co., Ltd., Taipei 106, TWN; INTERNET AG, Frankfurt am Main; Internet Solutions a Division a Dimension Data (Pty) Ltd., Bryanston, ZAF; InternetOne, Varese, ITA; InterNetX GmbH, Regensburg; Interoute Germany GmbH, Frankfurt am Main; interschol® Internet Services GmbH & Co. KG, Leonberg; Interwerk Rechenzentrum - ein Projekt der Rotorfly Europa GmbH & Co. KG, Hamburg; Interxion Deutschland GmbH, Frankfurt am Main; Inxmail GmbH, Freiburg; IP Telecom Bulgaria Ltd., Burgas, BGR; IP Transit, Inc., Fort Lauderdale, USA; IPA Institut für Personalentwicklung und Arbeitsorganisation, Köln; IPHH Internet Port Hamburg GmbH, Hamburg; ip-it consult GmbH, Klagenfurt am Wörthersee, AUT; iPlace Internet & Network Services GmbH, Rankweil, AUT; IP-Max S.A., Geneva, CHE; IQ Networks, Sulaimaniya, IRQ; ISP Service eG, Stuttgart; ISPro Internet KG, Hermsdorf; ith Kommunikationstechnik GmbH, Plattling; iWelt AG, Eibelsdorf; IX Reach Ltd., High Wycombe, GBR; IX Reach Ltd. c/o Cisco Webex, High Wycombe, GBR **[J]** JasTel Network Co., Ltd. Pak Kret District, Nonthaburi, THA;

Jobware Online-Service GmbH, Paderborn; Johannes Gutenberg-Universität Mainz/ZDV, Mainz; JSK Severnoe Volokno, Tyumen, RUS; JUCONOMY Rechtsanwälte, Düsseldorf **[K]** Kabel Deutschland Vertrieb und Service GmbH, Unterföhring; Kabelplus GmbH, Maria Enzersdorf, AUT; Kaia Global Networks Ltd., Buckinghamshire, GBR; Kakao Corp., Seongnam-shi Gyeonggi-do, KOR; Kalaydo GmbH & Co. KG, Köln; KAMP Netzwerkdienste GmbH, Oberhausen; Kantonsschule Zug - Informatik, Zug, CHE; Kapsch CarrierCom AG, Vienna, AUT; Kentix GmbH, Idar-Oberstein; KEVAG Telekom GmbH, Koblenz; Keycom PLC, Stafford, GBR; Key-Systems GmbH, St. Ingbert; keyweb AG, Erfurt; KielNET GmbH, Kiel; King & Wood Mallesons SJ Berwin, Frankfurt am Main; Kingston Technology GmbH, München; KIU - Kölner Internet Union e.V., Köln; Knipp Medien und Kommunikation GmbH, Dortmund; Komro GmbH, Rosenheim; Konica Minolta Business Solutions Europe GmbH, Langenhagen; KPMG AG, Düsseldorf; KPN EuroRings B.V., Frankfurt am Main; KT Corporation, Gyeonggi-do, KOR; Ktv Istar Ltd., Silistra, BGR; KVANT-TELECOM CJSC, Voronezh, RUS **[L]** LANTA Ltd., Tambov, RUS; Larsen Data ApS, København, DNK; Lasotel, Villeurbanne, FRA; Lattelecom SIA, Riga, LVA; LeaseWeb Network B.V., Amsterdam, NLD; LEITWERK AG, Appenweier-Urloffen; Leitwert GmbH, München; LEMARIT GmbH Business Domain Management, Harrislee; Lepida SpA, Bologna, IT; Level 3 Communications, LLC, London, GBR; Liazio SARL, Paris, FRA; Liberty Global Operations BV, Schiphol Rijk, NLD; Limelight Networks Inc., Tempe, USA; Link11 GmbH, Frankfurt am Main; LinkedIn Ireland Ltd., Dublin, IRL; Linode, LLC, Galloway, USA; Linx Telecommunications BV, Amsterdam, NLD; Liquid Telecom, London, GBR; Living Internet GmbH, Frankfurt am Main; LLC DataCenter M100, Moscow, RUS; LLC Equant, Moscow, RUS; LLC Irida Telecom, Аксай, RUS; LLC NTKS, Nizhny Tagil, RUS; LogoSoft d.o.o., Sarajevo, BIH; LIT Inc., Parma, ITA; Luxembourg Online SA, Luxembourg, LUX; LWLcom GmbH, Bremen **[M]** M247 Ltd., Manchester, GBR; Magna International (Germany) GmbH, Sailauf; Manx Telecom Ltd., British Isles, GBR; maxspot GmbH, Königs Wusterhausen; MDlink online service center GmbH, Magdeburg; Meanie, Voorburg, NLD; MEDIA BROADCAST GmbH, Köln; Media Exchange GmbH, Unterföhring; Media Network Services AS, Oslo, NOR; mediaBEAM GmbH, Ahaus; Megaspaces Internet Services GmbH, Landau; Messe Frankfurt Exhibition GmbH, Frankfurt am Main; Metroset, Nizhnevartovsk, RUS; mgm technology partners GmbH, München; Microsoft Deutschland GmbH, Unterschleißheim; Mihaylov TV LTD, Vratsa, BGR; Minds + Machines GmbH, München; Mittwald CM Service GmbH & Co. KG, Espelkamp; MIVITEC GmbH, Sinsing; MK Netzdienste GmbH & Co. KG, Minden; M-net Telekommunikations

GmbH, Nürnberg; mobile.international GmbH, Dreilinden; MOLDETELECOM S.A., Chisinau, MDA; MRV Communications GmbH, Darmstadt; MSK-IX JSC, Moscow, RUS; MTS PJSC, Moscow, RUS; MTX Services s.a.r.l. Linkey, Bettembourg, LUX; Multimedia Polska S.A., Warsaw, POL; Multiplay (UK) Ltd., Southampton, GBR; MVM NET Ltd., Budapest, HUN; MYGATE Management GmbH, Zürich, CHE; myLoc managed IT AG, Düsseldorf; myNET Internet Solutions, Landeck, AUT; Myra Security GmbH, München; mywire Datentechnik GmbH, Mannheim **[N]** n@work Internet Informationssysteme GmbH, Hamburg; Naitways, Paris, FRA; Nauka-Svyaz Ltd., Moscow, RUS; Naukowa I Akademska Siec Komputerowa jbr, Warszawa, POL; Naver Business Platform, Seongnam-si, Gyeonggi-do, KOR; Neo Telecoms SAS, Paris, FRA; NERIM, Paris, FRA; NESSUS GmbH, Wien, AUT; net services GmbH & Co. KG, Flensburg; net.DE AG, Hannover; NET1 Ltd., Sofia, BGR; NetAachen GmbH, Aachen; NetAssist LLC, Prague, CZE; NetByNet Holding LLC, Moscow, RUS; NetCologne GmbH, Köln; netcup GmbH, Karlsruhe; NetDescribe GmbH, Oberhaching; Neterra Ltd., Sofia, BGR; NETHINKS GmbH, Fulda; NetIX Communications, Sofia, BGR; NetNames GmbH, München; NETORN LLC, Moscow, RUS; netplace Telematic GmbH, München; NETPLANET GmbH, Wien, AUT; netplus.ch, Sierre, CHE; Netrouting, Spijkenisse, NLD; Netsign networks GmbH, Berlin; Netskope UK Ltd., London, GBR; NetUSE AG, Kiel; Network Box Deutschland GmbH, Köln; networker NRW e.V., Essen; Neue Medien Münnich GmbH, Friedersdorf; Neuronnexon, Amiens, FRA; Neustar, Inc., Sterling, USA; Nexinto GmbH, Hamburg; nexiu GmbH, Wehrheim; next layer Telekommunikations- dienstleistung und Beratungs GmbH, Wien, AUT; nexum AG, Köln; NForce Entertainment B.V., Roosendaal, NLD; Nianet a/s, Glostrup, DNK; nic.at GmbH, Salzburg, AUT; nLayer Communications Inc., Chicago, USA; Nlyte Software, London, GBR; NMMN New Media Markets & Networks IT-Services GmbH, Hamburg; noris network AG, Nürnberg; Notstromtechnik-Clasen GmbH, Ahrensburg; Novadex GmbH, Bietigheim-Bissingen; NOVATEL EOOD, Sofia, BGR; NTCOM LLC, Moscow, RUS; NTT Europe Ltd. Head Office Europe, London, GBR; NürnbergMesse GmbH, Nürnberg; NYNEX satellite OHG, Darmstadt **[O]** ODN OnlineDienst Nordbayern GmbH & Co. KG, Fürth; OEV Online Dienste GmbH, Düsseldorf; oja.at GmbH, Viktring, AUT; OMCnet Internet Service GmbH, Quickborn; One.com, København V, DNK; OnLive, Mountain View, USA; Onstage Online GmbH, Wien, AUT; OODRIVE Germany GmbH, München; OOO „TK Telecom“, Samara, RUS; OOO Media, Moskau, RUS; Ooredoo Qtel aka Qatar Telecom, Doha, QAT; Open Peering B.V., Den Hague, NLD; OpenCarrier e.G., Düsseldorf; OpenDNS, San Francisco, USA; Open-Xchange GmbH, Olpe; Oppenhoff & Partner, Köln; Opteamax GmbH, Rheinbreitbach; optivo GmbH,



Berlin; OSN Online Service Nürnberg GmbH, Nürnberg; OTEGlobe S.A., Athens, GRC; OVH SAS, Roubaix, FRA; OXSEED Logistics GmbH, Bielefeld **[P]** Pacnet Global Headquarter Singapore, Singapore, SGP; Pactas GmbH, Frankfurt am Main; Pallas GmbH, Brühl; Panduit EEG, Frankfurt am Main; PartnerGate GmbH, München; Patentanwälte Freischem, Köln; PAV Germany GmbH Panda Security, Duisburg; PCCW Global Ltd., Quarry Bay, HKG; Peer 1 Hosting, Vancouver, CAN; Peering GmbH, Berlin; Perf-IT B.V., Sliedrecht, NLD; Performance Media 360 Grad - Gesellschaft für online Direktmarketing mbH, München; Pflanzkom, Gesellschaft für Telekommunikation mbH, Ludwigshafen; PIN Co. Ltd, Saint-Petersburg, RUS; PIRONET NDH Datacenter AG & Co. KG, Köln; PJSC Datagroup, Kyiv, UKR; PJSC MegaFon, Moscow, RUS; plentyLeads GmbH, Köln; Plus.line AG, Frankfurt am Main; PlusServer Deutschland GmbH, Köln; PlusServer GmbH, Köln; Polkomtel Sp. z o.o., Warszawa, POL; pop-interactive GmbH, Hamburg; PORTLANE AB, Hagersten, SWE; portrix Systems GmbH, Hamburg; Post Group Post Luxembourg, Luxembourg, LUX; Poznan Supercomputing and Networking Center PSNC, Poznań, POL; Premiere Conferencing Ireland Ltd., Clonakilty, IRL; Previder BV, Hengelo, NLD; Prime Telecom S.r.l., Bucharest, ROU; PrimeTel PLC, Limassol, CYP; PRIOR1 GmbH, Sankt Augustin; Private Layer, Panama City, PAN; Probe Networks, Saarlouis; ProCom-Bestmann Vertrieb + Service von Headsetlösungen u. Bürocommunication e.K., Naumburg; Proleagion GmbH, Wiesbaden; proRZ Rechenzentrumsbau GmbH, Wallmenroth; PSW GROUP GmbH & Co. KG, Fulda; PT Telekomunikasi Indonesia International Telin, Jakarta Selatan, IDN; punkt.wien GmbH, Wien, AUT; Purtel.com GmbH, München **[Q]** QSC AG, Köln; Quickline AG, Nidau, CHE; Qwest Communications International Ltd. c/o Bryan Cave, London, GBR **[R]** Radford An Aon Hewitt Company, München; Ralf Bender RB C+C, Muehlthal; Ramtel Ltd., Ramenskoye, RUS; Rascom CJSC, St. Petersburg, RUS; Radiodata IT-Lösungen & Services GmbH, Münster; ratiokontakt GmbH, Hallstadt; RCS&RDS S.A., Bucharest, ROU; Reasonnet IP Networks, Amsterdam, NLD; Recent Marketing UG (haftungsbeschränkt), Wuppertal; Rechenzentrum der Stadt Wien GmbH, Wien, AUT; RECONN. Operator Svyazi Ltd., Moscow, RUS; Red Hat GmbH, Grasbrunn; Redder Telco Srl., Camisano Vicentino, ITA; regio[.NET] Upstream GmbH & Co. KG, Ebersburg; regiodot GmbH & Co. KG, Essen, Ruhr; RegioNet Schweinfurt GmbH, Schweinfurt; Rehwork GmbH, Hamburg; Reichle & De-Massari AG, Gummertsbach; RelAix Networks GmbH, Aachen; RETN Ltd., London, GBR; Revolvermänner GmbH, Düsseldorf; Rezopole, Lyon, FRA; rh-tec Business GmbH, Bad Oeynhausen; Rickert Rechtsanwälts-Gesellschaft mbH, Bonn; Riot Games Limited, Santa Monica, USA; Rittal GmbH & Co. KG, Herborn;

R-KOM GmbH & Co. KG, Regensburg; rockenstein AG, Würzburg; Rocket Fuel Inc., Redwood City, USA; ROMTELECOM S.A., Bucuresti, ROU; rrbone UG (haftungsbeschränkt), Dortmund; RTL Interactive GmbH, Köln; Rubicon Project Hopper, Los Angeles, USA **[S]** S.C. Teen Telecom SRL, Bucharest, ROU; Salesforce.com Germany GmbH, München; SAP Deutschland SE & Co. KG, Walldorf; Sapphire Networks, Gibraltar, GIB; SAS JAGUAR NETWORK, Marseille, FRA; SaSG GmbH & Co. KG, Gilching; Saudi Telecom Company - STC, Riyadh, SAU; SBB - Serbia Broadband Srpske Kablovske Mreze d.o.o., Belgrade, SRB; SBC (Germany) GmbH & Co. KG, München; SBC Deutschland GmbH, Berlin; ScaleUp Technologies GmbH & Co. KG, Hamburg; ScanPlus GmbH, Ulm; Schäfer Ausstattungs-Systeme GmbH, Neunkirchen; Schleifenbauer Products B.V., Rosmalen, NLD; Schneider Electric GmbH, München; Schöber Information Group Deutschland GmbH, Ditzingen; SCHUFA Holding AG, Wiesbaden; sdt.net AG, Aalen; SDV Plurimedia, Strasbourg, FRA; SE „Special Telecommunications Center“, Chisinau, MDA; SEACOM Ltd., Ebene, MUS; SECOMMERCE GmbH, Eschborn; Sego GmbH, Köln; Serverel Corp., Sannyvale, USA; Serverius B.V., Meppel, NLD; Services Industriels de Geneve SIG Telecom, Le Lignon, CHE; SFR SA, Lille Cedex 9, FRA; SG.GS, Singapore, SGP; Shenzhen WE Trans, Hong Kong, HKG; SIFY Technologies Ltd., Chennai, IND; SIL Citycable, Lausanne, CHE; Silknet JSC, Tbilisi, GEO; Silver Media Direct Marketing GmbH, Fürth; Sipwise GmbH, Brunn am Gebirge, AUT; Six Degrees Managed Data Ltd., Warwickshire, GBR; SK broadband, Seoul, KOR; Smartjog SAS, Paris, FRA; Smart-NIC GmbH, München; SMK Energy Plc., Sofia, BGR; Softlayer Dutch Holdings B.V., Amsterdam, NLD; Softnet d.o.o., Trzin, SVN; SolNet - Internet Solution Provider BSE Software GmbH, Solothurn, CHE; SpaceNet AG, München; Sparkassen-IT GmbH & Co. KG, Calw; Spectrum Net JSC, Sofia, BGR; Speedy Networks LLC, Moscow, RUS; SPLIO, Versailles, FRA; Spotify GmbH, Berlin; SprintLink Germany GmbH, Neu Isenburg; Sri Lanka Telecom PLC, Colombo, LKA; SSP Europe GmbH, München; StackNet Service LLC, Pushino, RUS; Stadtnetz Bamberg Gesellschaft für Telekommunikation, Bamberg; Stadtwerke Feldkirch, Feldkirch, AUT; Stadtwerke Hall in Tirol GmbH, Hall in Tirol, AUT; StarHub Ltd, Singapore, MYS; Start Telecom JSC, Moscow, RUS; STARTPLATZ Köln, Köln; Stefan Reisenbauer, Seekirchen am Wallersee, AUT; Stella Telecom, Valbonne, FRA; STRATO AG, Berlin; Stulz GmbH, Hamburg; süc/Idacor GmbH, Coburg; Sunrise Communications AG, Urdorf, CHE; Superonline Iletisim Hizmetleri A.S., Istanbul, TUR; SurfRight, Hengelo, NLD; SVYAZINFORM OJSC, Moscow, RUS; Swisscom AG, Bern, CHE; Swyx Solutions AG, Dortmund; synaix Gesellschaft für angewandte Informations-Technologien mbH, Aachen; SysEleven GmbH,

Berlin **[T]** T&A SYSTEME IT Infrastructure Solutions GmbH, Hattingen; T.E.S.T. LLC, Kiev, UKR; TalkTalk Group, Birchwood, GBR; Tango S.A., Bertrange, LUX; Tata Communications Deutschland GmbH, Frankfurt am Main; TCI Transformation Consulting International GmbH, Mannheim; T-CIX, Sofia, BGR; Teamware GmbH, München; Tech Data GmbH & Co. OHG, München; Technische Universität Darmstadt Hochschulrechenzentrum, Darmstadt; Technische Universität München Fakultät für Informatik, Lehrstuhl I8 - Netzarchitekturen und Netzdienste, Garching; TECTUM Consulting GmbH, Gelsenkirchen; TELE AG, Leipzig; TeleticityGroup Germany GmbH, Frankfurt am Main; TeleticityGroup UK, London, GBR; Telecom Egypt, Cairo, EGY; Telecom Luxembourg Private Operator S.A., Luxembourg, LUX; Telecom Namibia Ltd., Windhoek, NAM; Telecom TZ Ltd., Moscow, RUS; Telecom-Birzha, LLC, Moscow, RUS; Telecommunication networksTELENET LLC, Samara, RUS; TeleData GmbH, Friedrichshafen; Telefónica Germany GmbH & Co. OHG, München; TELEFÓNICA INTERNATIONAL WHOLESALE SERVICES, S.L., Barcelona, ESP; Telehouse Deutschland GmbH, Frankfurt am Main; Telehouse EAD, Sofia, BGR; Telekom Malaysia Berhad, Kuala Lumpur, MYS; TELEKOM SLOVENIJE d.d., Ljubljana, SVN; Telekom Srbija Commercial Affairs Division Wholesale and Multimedia Function, Belgrade, SRB; Telekomunikation Lindau (B) GmbH, Lindau; TelemaxX Telekommunikation GmbH, Karlsruhe; Telenor Norge AS, Fornebu, NOR; TeleTruST - Bundesverband IT-Sicherheit e.V., Berlin; Telewizja Kablowa Koszalin Sp. z o.o., Koszalin, POL; Telia Latvija SIA, Riga, LVA; TeliaSonera International Carrier, Frankfurt am Main; Teliko GmbH, Limburg; Telindus Luxembourg S.A., Strassen, LUX; Telkom SA SOC Ltd., Pretoria, ZAF; Telstra Ltd., London, GBR; terralink networks GmbH, Hamburg; teuto.net Netzdienste GmbH, Bielefeld; The unbelievable Machine Company GmbH, Berlin; Thomsen Trampedach GmbH, Rotkreuz, CHE; Thüga MeteringService GmbH, Naila; TI GERMANY, Frankfurt am Main; TimoCom Soft- und Hardware GmbH, Erkrath; TIRASTEL GmbH, Wiesbaden; TIS Dialog LLC, Kalingrad, RUS; Titan Networks Internet & Telecommunications Service Providing GmbH, Hofheim am Taunus - Wallau; TMR - Telekommunikation Mittleres Ruhrgebiet GmbH, Bochum; TOP NET CJSC, Kyiv, UKR; topline GmbH, Darmstadt; Transatel, Neuilly-sur-Seine, FRA; transmode systems AB, Stockholm, SWE; TransTeleCom Company JSC, Moscow, RUS; Transworld Associates (Pvt) Ltd., Islamabad, PAK; TRC FIORI LLC, Moscow, RUS; treaction AG, Karlsruhe; Tremi & Sturm Datentechnik GmbH, Offenbach; Trend Micro Deutschland GmbH, Hallbergmoos; Trusted Network GmbH, Unterschleißheim; T-Systems Multimedia Solutions GmbH, Dresden; TUI InfoTec GmbH, Hannover; Tulock GmbH, Saarbrücken; Türk Telekom International H Kft., Budaörs,

HUN; Türk Telekomünikasyon A.S., Ankara, TUR; TÜV Rheinland Cert GmbH, Köln; TV1 GmbH, Unterföhring; Twitch Interactive, Inc., San Francisco, USA; TWL-KOM GmbH, Ludwigshafen; TYPO3 Association, Baar, CHE **[U]** UAB Bité Lietuva, Vilnius, LTU; Ucom LLC, Yerevan, ARM; Umniah Mobile Company, Amman, JOR; Unicast Invest LLC, Kiev, UKR; Unify GmbH & Co. KG, München; Unilink Telekommunikationslösungen für Moskau, Moscow, RUS; Union Betriebs-GmbH, Rheinbach; united-domains AG, Starnberg; Unitymedia BW GmbH, Köln; Unitymedia NRW GmbH, Köln; Universal Card Technologies JSC Prime-line JSC, Moscow, RUS; Universität zu Köln Seminar für Medien- und Technologiemanagement, Köln; URAL WES CJSC, Ekaterinburg, RUS; Ustream Inc., San Francisco, USA; uvensys GmbH, Butzbach **[V]** VASCO Data Security International GmbH, Glattbrugg, CHE; Vectra S.A., Gdynia, POL; velia.net Internetdienste GmbH, Hanau; Venserve Ventures LLP, Birmingham, GBR; vente-privee.com, La Plaine Saint Denis, FRA; VeriSign Netherlands B.V., Rotterdam, NLD; Verizon Deutschland GmbH, Dortmund; Verlag für die deutsche Wirtschaft AG, Bonn; Versatel Deutschland GmbH, Düsseldorf; Viatel Deutschland GmbH, Frankfurt; Virgin Media (Telewest Broadband), Hook, GBR; Virgin Media Ltd., Hook, GBR; VIVAI Software AG, Dortmund; VKontakte Ltd., Saint-Petersburg, RUS; Vodafone Enterprise Germany GmbH, München; Vodafone GmbH, Düsseldorf; Voxility S.r.l., Bucuresti, ROU; VSE NET GmbH, Saarbrücken; Vshosting s.r.o., Praha, CZE **[W]** Wagner Group GmbH, Langenhagen; WATCHEVER GROUP SA, Levallois-Perret, FRA; Wavenet Ltd., Solihull, GBR; Webdisco GmbH & Co. KG, Münster; WEISS Doppelbodensysteme GmbH, Schwäbisch Gmünd - Lindach; Well-comm Ltd., Lytkarino, RUS; Whitelabel, Landgraaf, NLD; WideVOIP / Chmurtz SARL, Strasbourg, FRA; Wifiweb s.r.l., Altavilla vicentina, ITA; WIK Consult GmbH, Bad Honnef; Wikia Inc. (Fastly), St. Petersburg, USA; WILDE BEUGER SOLMECKE Rechtsanwälte, Köln; wilhelm.tel GmbH, Norderstedt; Will van Gulik, Geneva, CHE; Wind Telecomunicazioni S.p.A., Rome, ITA; WitCOM Wiesbadener Informations- und Telekommunikations GmbH, Wiesbaden; W-IX Ltd., Moscow, RUS; World Streammedia, Inc., New Rochelle, USA; WV Fiber Inc., Nashville, USA **[X]** Xantaro Deutschland GmbH, Hamburg; Xenna Services GmbH, Frankfurt am Main; XING Events GmbH, München; XO International Inc., Herndon, USA; XQueue GmbH, Offenbach **[Y]** Yahoo! Europe Ltd., London, GBR; Yandex Europe B.V., Shiphol, NLD **[Z]** Zain Group Head Office, Safat-Kuwait, KWT; Zajil International Telecom Company KSCC, Kuwait City, KWT; ZAO „Uniontel“, Moscow, RUS; Zattoo Europa AG, Zürich, CHE; Zayo Group UK Ltd., London, GBR; ZEAL Network SE, London, GBR; Zimory GmbH, Berlin; Zscaler, Inc., San Jose, USA

Stand: Dezember 2015

## 12. eco Association Structure and Holdings

eco – Association of the Internet Industry e.V. was founded in Bonn in 1995 as eco – Electronic Commerce Forum e.V.. From the very beginning, the association included taxable and non-taxable business areas, and was expanded in 2003 to cover asset management. This was necessary due to the spinning off of the working group DE-CIX to become an independent limited liability company (GmbH), and the simultaneous spinoff of individual services into eco Service GmbH. Both companies were established as wholly-owned subsidiaries of the eco Association.

In 2005, a further company, eco IT Service & Beratung GmbH, was founded as a wholly-owned subsidiary. This is to be understood as an internal service provider.

The internationalization of the DE-CIX activities, decided upon in 2010, was highlighted in 2013 by the establishment of DE-CIX International AG. At this time, the business purposes of the company were re-formulated. DE-CIX Management GmbH has the task of delivering peering and interconnection services within Germany, whereas DE-CIX International AG is responsible for service provision abroad.

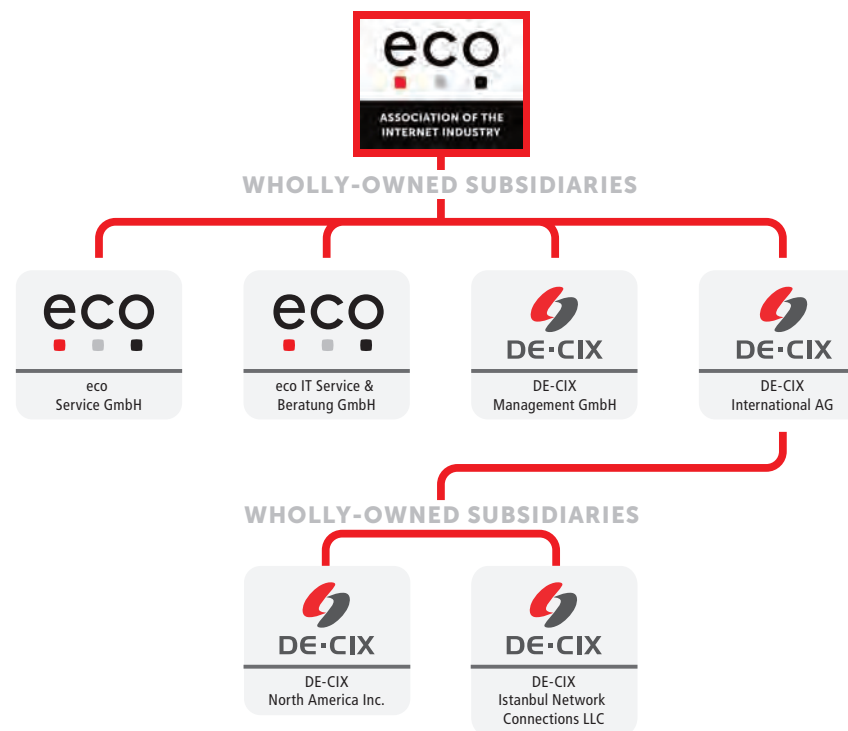
All companies have their headquarters in Cologne, and there are also branch offices in Berlin (eco) and Frankfurt.

In order to open up the American market, DE-CIX North America Inc. was also founded in 2013, in Delaware, as a wholly-owned subsidiary of DE-CIX International AG.

In order to open up the market in the Near East, DE-CIX Istanbul Network Connections LLC was founded in 2015 as a subsidiary of DE-CIX International AG.

DE-CIX currently operates exchange points in Frankfurt, Dusseldorf, Hamburg and Munich, as well as in New York, Palermo, Marseille, Istanbul, and Dubai.

Further exchange points are in the process of being established or are in the planning phase.



eco – Association of the Internet Industry	eco Service GmbH	DE-CIX International AG	DE-CIX North America Inc.
	eco IT Service & Beratung GmbH		
	DE-CIX Management GmbH		
CEO	CEO	Supervisory Board	Board of Directors
Harald A. Summa	Harald A. Summa	Felix Höger (Chair)	Harald A. Summa
Board of Directors		Klaus Landefeld	Ivo Ivanov
Prof. Michael Rotert		Rudolf van Megen	DE-CIX Istanbul Network Connections LLC
Oliver J. Süme		Board of Directors	
Klaus Landefeld		Harald A. Summa	Board of Directors
Prof. Dr. Norbert Pohlmann		Ivo Ivanov	Harald A. Summa
Felix Höger			Ivo Ivanov



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