Identity Management: How Do We Get Rid of the Passwords in Web Authentication?

Klaus Schmeh, crypto\vision
Now I know, why it’s called cloud computing.

Post-it Syndrome
Security experts now recommend changing passwords.

So, why do we use passwords at all?
Password alternatives

How Do We Get Rid of the Passwords in Web Authentication?
How can we make smart cards more popular in Web Authentication?

Specialized on cryptography

More than 50 million people use our solutions.

Products: smart card middleware cv act sc/interface and many others
Use Smart Cards. It’s secure.

- Secure key storage
- Security due to PIN
- Secure processing
- Security due to PIN counter
- Security due to digital signatures
- Security due to photograph
Use Smart Cards. It's secure.

If you want to sell security, don't try to sell security.

Security due to PIN

Secure key storage

Secure processing

Security due to PIN counter

Security due to digital signatures

Security due to photograph

Security is rarely a killer argument
**TCO Test**

- **Passwords**
  - low initial costs
  - many hotline calls

- **Smart Cards**
  - high initial costs
  - hotline calls reduced

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Smart Cards
high initial costs
hotline calls reduced

Passwords
low initial costs
many hotline calls

Reducing hotline calls is rarely a killer argument
<table>
<thead>
<tr>
<th><strong>Passwords</strong></th>
<th><strong>Smart Cards</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>at least 10 characters</td>
<td>4 digits</td>
</tr>
<tr>
<td>at least 1 upper case</td>
<td></td>
</tr>
<tr>
<td>at least 1 lower case</td>
<td></td>
</tr>
<tr>
<td>at least 1 numerical character</td>
<td></td>
</tr>
<tr>
<td>at least 1 &amp;-!#*</td>
<td></td>
</tr>
<tr>
<td>change every 3 months</td>
<td></td>
</tr>
</tbody>
</table>

User-friendliness is never a killer argument
Form Factors are never a killer argument
Where the hell is the killer argument?
It’s the apps, stupid!

- Facebook
- LinkedIn
- Xing
- Freemail
- SAP
- Amazon
- voice mail
- e-Bay
- intranet
- cellphone
- office door
- online banking
- PC
- intranet
- cellphone
- e-Bay
- voice mail
- Twitter
- password
- Freemail
- Skype
- SAP
WLAN authentication

e-mail security
digital signature
hard-disk encryption
WLAN
intranet authentication
VPN
Web authentication
Single Sign-On

e-mail security
digital signature
hard-disk encryption
WLAN
intranet authentication
VPN
Web authentication
Single Sign-On

Security
Less helpdesk calls
Applications
Form factors
User-friendliness
Form factors

Less helpdesk calls

User-friendliness

Security

Applications

Form factors

Less helpdesk calls

User-friendliness
New German Identity Card

e-mail security (end-to-end)
digital signature
hard-disk encryption
WLAN
VPN
Single Sign-On
Web authentication
There is no easy answer!

How can we make smart cards more popular in Web Authentication?
It’s not always the apps, stupid!
It's a long road to smart cards in web authentication. But we have to go it.

Questions?