WHY IS USABLE SECURITY HARD?
AND WHAT SHOULD WE DO ABOUT IT?

Adrienne Porter Felt, Google
A security feature should be...

**invisible** when you don’t need it, **helpful** when you do
Ijeoma
@ijeoma1029

I forgot this isn't a free country. I was just about to use "my computer" and I saw the following message: "Your connection is not private."
5:11 PM · 17 Dec 15

Will Wheeler
@_Norsche

@Charter Seems my internet is out. Every webpage I visit on every device connected to wifi says "your connection is not private". Help plz?
12:58 PM · 06 Dec 15
It’s a Hard Lock Life: A Field Study of Smartphone (Un)Locking Behavior and Risk Perception

Authors: Marian Harbach, Leibniz University Hannover; Emanuel von Zezschwitz, Andreas Riehle, and Alexander De Luca, University of Munich (LMU); Matthew Smith, Rheinische Friedrich-Wilhelms-Universität

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"They brought in the horrible key ring thing!" Analysing the Usability of Two-Factor Authentication in UK Online Banking

(Submitted on 19 Jan 2015)

To prevent password breaches and guessing attacks, banks increasingly turn to two-factor authentication (2FA), requiring users to present at least one more factor, such as a one-time password generated by a hardware token or received via SMS, besides a password. We can expect some solutions — especially those adding a token — to create extra work for users, but little research has investigated usability, user acceptance, and perceived security of deployed 2FA. This paper presents an in-depth study of 2FA usability with 21 UK online banking customers, 16 of whom had accounts with more than one bank. We collected a rich set of qualitative and quantitative data through two rounds...
Usable security is *science*,

BUT NOT ENOUGH PEOPLE TREAT IT LIKE SCIENCE
NOTIFICATIONS

GEOLOCATION

Acceptance rate

# prior requests

0.00%
10.00%
20.00%
30.00%
40.00%

0 5 10
The site ahead contains malware
Attacks currently on example.com might attempt to install dangerous apps on your device that steal or delete your information (for example, photos, passwords, messages, and credit cards).

Deceptive site ahead
Attacks on example.com may trick you into doing something dangerous like installing software or revealing your personal information (for example, passwords, phone numbers, or credit cards).
<table>
<thead>
<tr>
<th>Control</th>
<th><strong>The website ahead contains malware!</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The website ahead contains malware! Go back!</td>
</tr>
<tr>
<td>Control</td>
<td><strong>This file is malicious.</strong></td>
</tr>
<tr>
<td></td>
<td>This file is malicious. Discard this file to stay safe.</td>
</tr>
<tr>
<td></td>
<td>This file is malicious. To stay safe, don't run it.</td>
</tr>
<tr>
<td></td>
<td>This file is malicious. To stay safe, discard it.</td>
</tr>
<tr>
<td>Control</td>
<td>Message</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>The website ahead contains malware!</td>
</tr>
<tr>
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<td>This file is malicious. To stay safe, discard it.</td>
</tr>
</tbody>
</table>
Your connection is not private

Attackers might be trying to steal your information from example.com (for example, passwords, messages, or credit cards). NET-ERR_CERT.Contains_ERRORS

- Automatically report details of possible security incidents to Google. Privacy policy

BACK TO SAFETY

ADVANCED

La conexión no es privada

Es posible que usuarios no autorizados estén intentando robar tu información de example.com (por ejemplo, contraseñas, mensajes o tarjetas de crédito). NET-ERR_CERT.Contains_ERRORS

- Informar automáticamente detalles de posibles incidentes de seguridad a Google (Política de privacidad)

VOLVER A SEGURIDAD

AVANZADA
MALWARE WARNINGS

[Bar chart showing malware warnings across different countries for Android and Windows.]
Usable security is science.
SO DO GREAT SCIENCE & SHARE IT WITH EVERYONE