



Usable Security

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Content

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Definition of Security

1

Risk of CIA violation



Definition of Usable (Security)

Security controls are:

- accepted
- learnable
- cost effective



Accountability will not work for B2C Apps



Nr 1 Risk in IT (Security)

Complexity



Nr 1 Goal in Usable Security

Simplicity





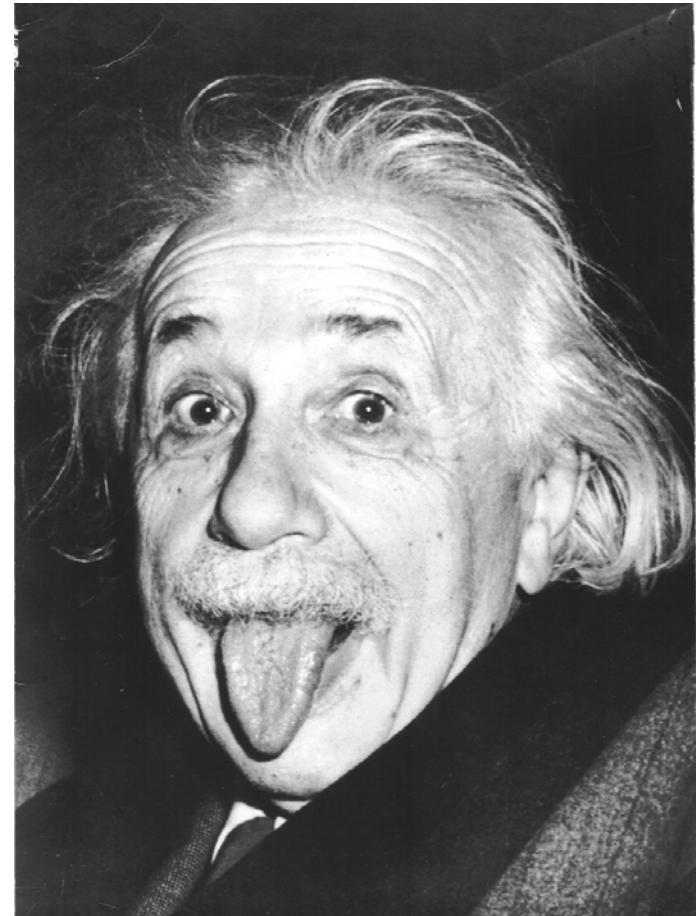
Simplicity

From
wisdom
to
action

Simplicity is
the ultimate
sophistication



Make it as
simple as
possible but
not simpler



to eliminate
the
unnecessary
so that the
necessary
may speak.



REDUCE
ORGANIZE
SAVE TIME
LEARN
EMOTION



10 Laws of Simplicity
by John Maeda



Usable Security in the SDLC



Performance Security Usability

One Architect for
Everything?

Personas

Align Thinking
Focus Design
Recruit Testers

EMOTION

M1 CONFIDENTIAL

1 Primäre Persona

1.1 Ahmed Maalouf

53 Jahre, verheiratet, MBA des Imperial College in London UK, wohnhaft in Beirut (Republik Libanon). Arbeitet als selbstständiger Geschäftsmann im Import / Export. Zwei seiner Söhne sind ebenfalls in der Firma beschäftigt. Politisch engagiert sich Ahmed persönlich und finanziell in einer Bewegung „Freies Libanon“.



Private Situation und Einstellung: Ahmed zählt zur libanesischen Elite, welche von den Auswirkungen des Krieges 2006 weitgehend verschont geblieben ist. Geschäft- und Privatleben sind für Ahmed untrennbar miteinander verbunden. Die Grundlage für sein Unternehmen sowie auch sein Sozialleben bildet ein Netzwerk aus nationalen und internationalen Kontakten.

Drei von Ahmeds 5 Kindern haben im europäischen Ausland studiert. Trotz der eigenen Auslandserfahrung und der unsicheren Situation im Libanon, kommt es für Ahmed und seine Familie nicht in Frage, Beirut zu verlassen.



Wireframes

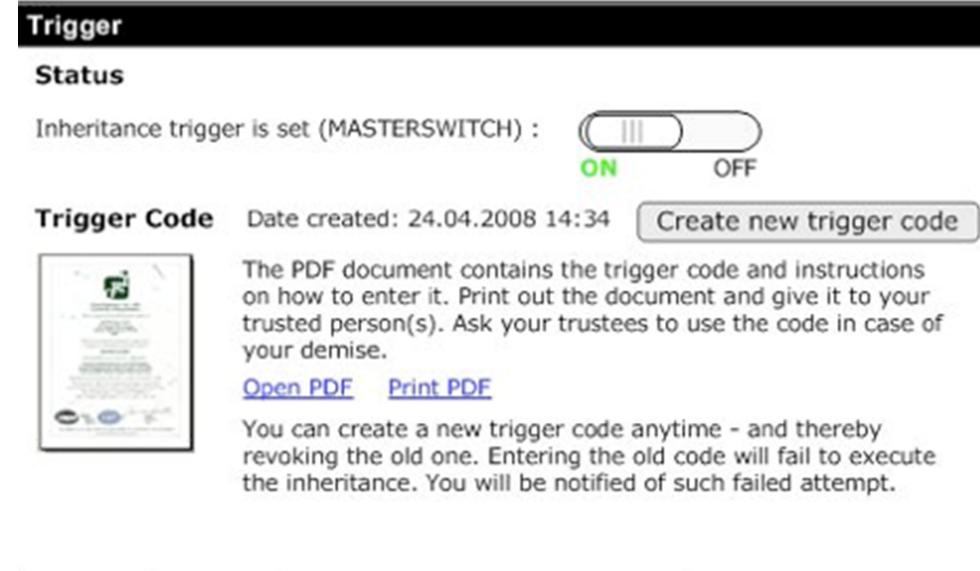
Compare Alternatives
Organize Elements
Reduce Navigation

ORGANIZE



Name	Message	Inheritance enabled
Gabi	Dear Ergi, I ..	<input checked="" type="checkbox"/>
Ergi	-	<input checked="" type="checkbox"/>
Katrin	-	<input type="checkbox"/>

„Inheritance enabled“-
Funktionalität wird abhängig
vom geschätzten Aufwand nicht
umgesetzt.



Trigger
Status
Inheritance trigger is set (MASTERSWITCH) : 
Trigger Code Date created: 24.04.2008 14:34 Create new trigger code

The PDF document contains the trigger code and instructions on how to enter it. Print out the document and give it to your trusted person(s). Ask your trustees to use the code in case of your demise.

[Open PDF](#) [Print PDF](#)

You can create a new trigger code anytime - and thereby revoking the old one. Entering the old code will fail to execute the inheritance. You will be notified of such failed attempt.



Graphical Design

Guidelines
Re-Usable Panels
Consistency Checks

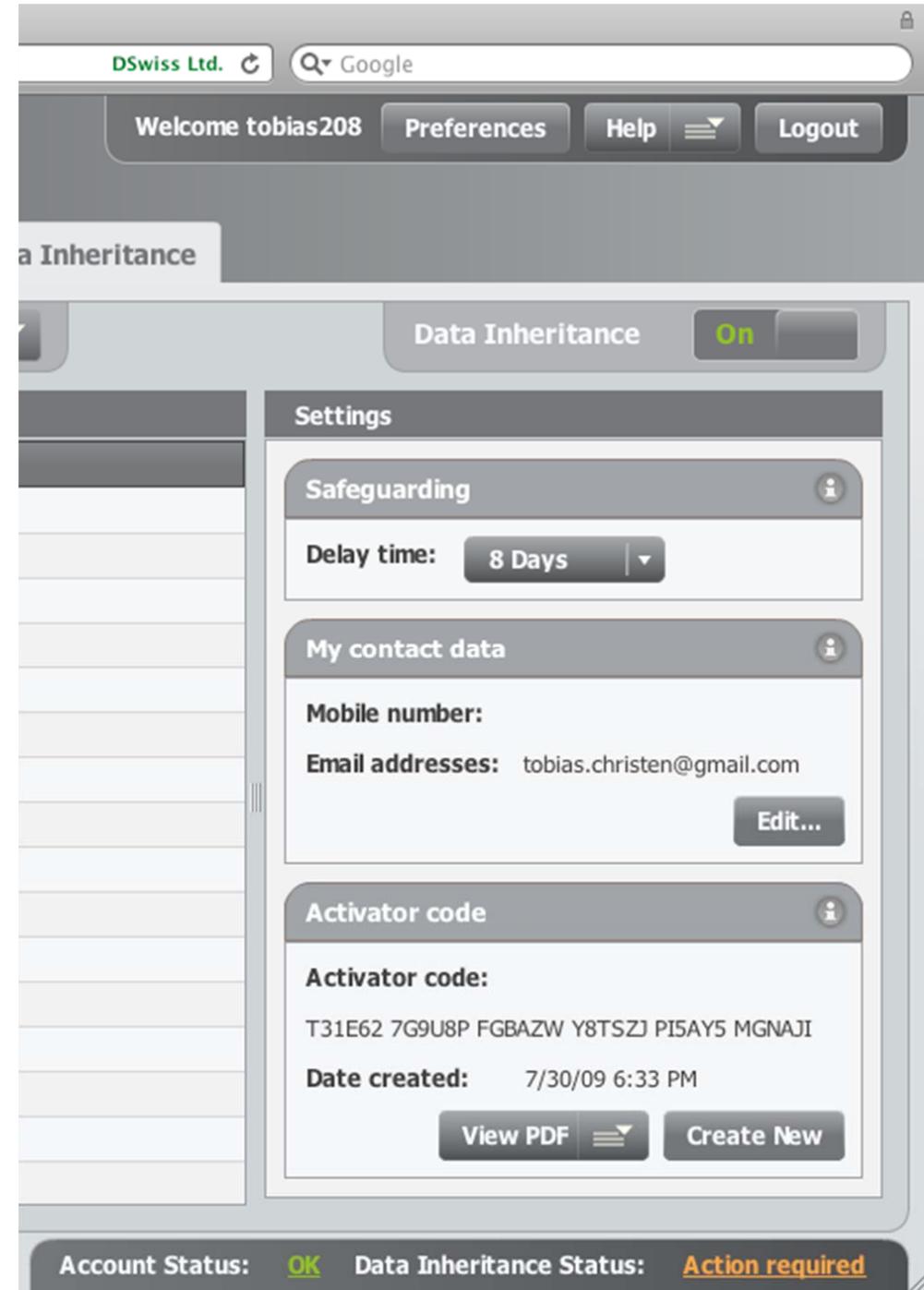
LEARN

The screenshot shows a web-based application for managing inheritance. At the top, a navigation bar includes 'Welcome, Ahmed Maalouf', 'Help', 'Options', and 'Logout'. Below this, a tab bar has 'Inheritance' selected. A status bar at the top right shows 'Inheritance is activated' and 'Switch off'. Below the tabs, a message bar indicates '3 heirs defined' and '0 of 3455 files assigned' with a warning icon. The main content area is a table with columns: 'Enabled', 'Files assigned', 'Last changed', and 'Data delivery'. The first row shows 'Enabled' as 'Enabled', 'Files assigned' as '123', 'Last changed' as '12.08.2010', and 'Data delivery' as 'Secure access'. A tooltip for this row states: 'Trigger Code not printed yet. The Trigger Code has been created by the DataInherit application. But it has never been send to a trustee. The DataInherit Service will only work with a trustee to trigger the code.' Below this row are two more rows with 'Enabled' as 'Disabled' and '0' in the other columns. A 'View tutorial' and 'Print now' button is at the bottom of this section. The bottom panel, titled 'Safeguarding', contains the message 'Not defined yet.' and an 'Edit' button. A status bar at the bottom shows 'Account Status OK', 'Inheritance Status Action Required', and a circular icon.



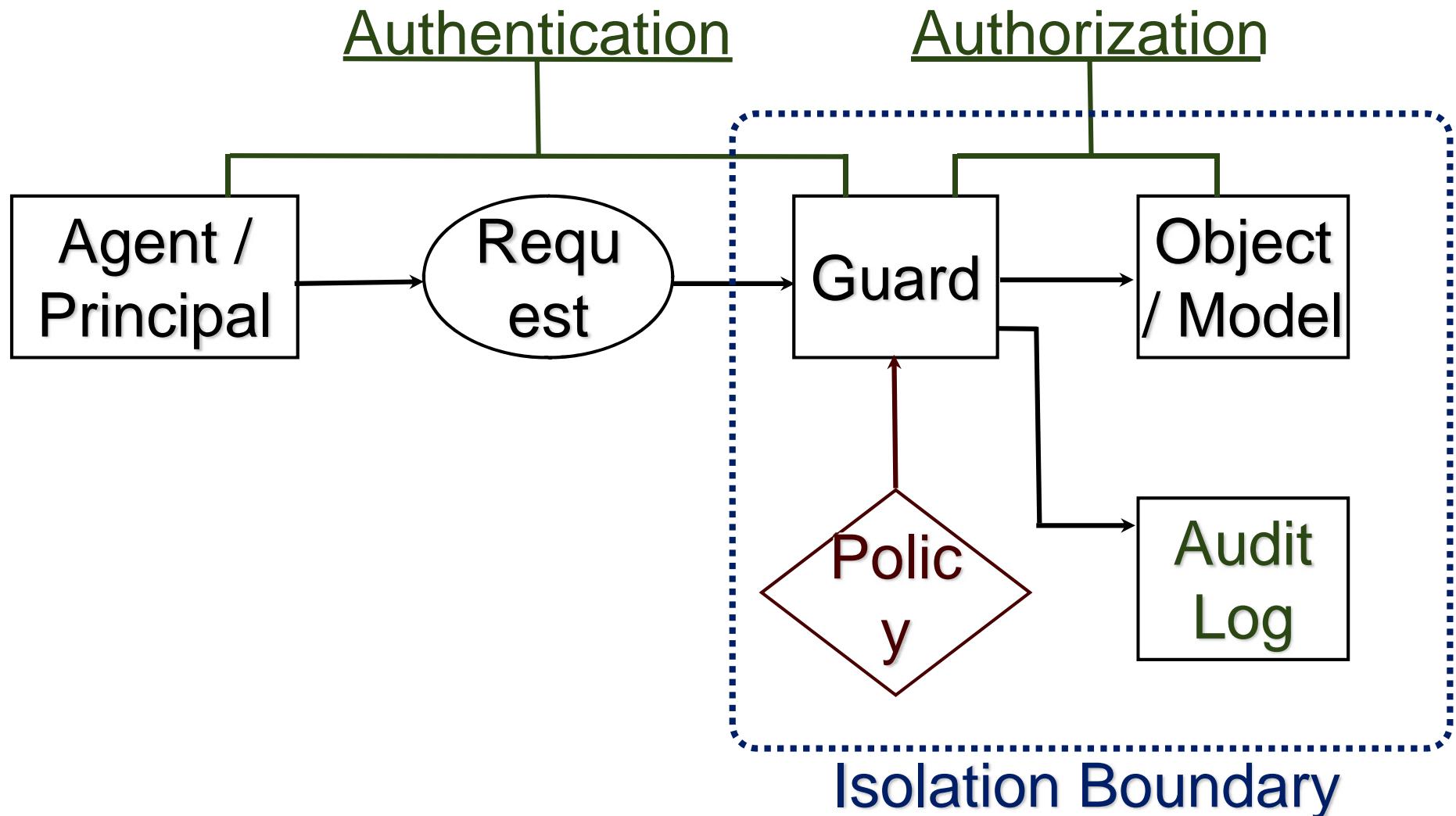
Feedback Driven Small Improvements

SAVE TIME



What others said





The missing model ?

Burt Lampson



Exploit differences between users and bad guys

Bruce Tognazzini



Exploit differences in physical location

Bruce Tognazzini



Make security understandable

- Reduce configurability
- Visible security states
- Intuitive user interfaces
- Metaphors that users can understand



Usable Security Controls for Internet Apps

- Authentication
- Password helpers
- Audit trails
- Privacy Protection



End-User



Sys-Admin



Security
Operations

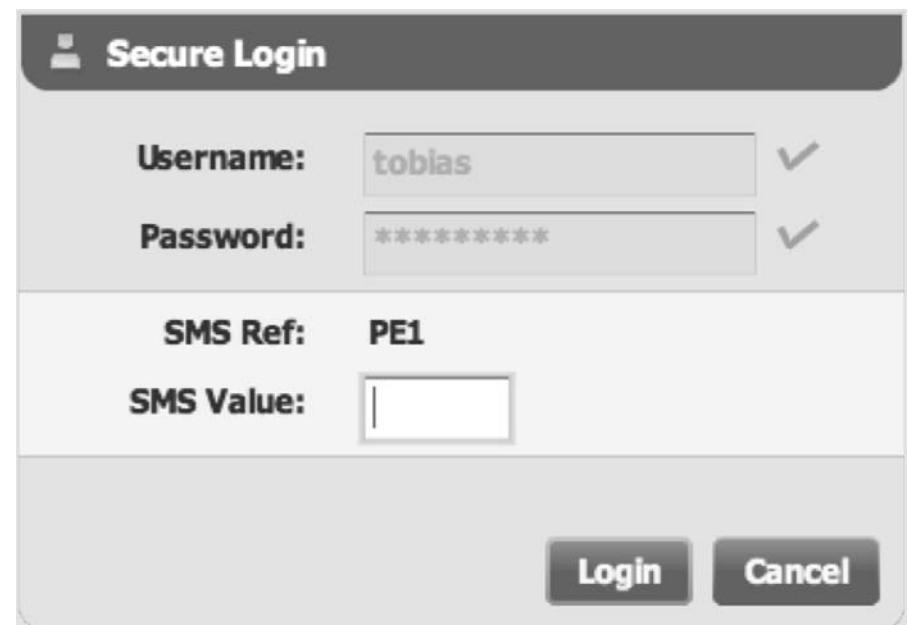


Secure Remote Password Protocol

Nothing new to learn from a user's perspective

Mitigates several pw related threats

Provides a symmetric shared secret as a side-effect



The image shows a 'Secure Login' interface. At the top, there is a user icon and the text 'Secure Login'. Below this, there are two text input fields: 'Username' containing 'tobias' with a checkmark to its right, and 'Password' containing '*****' with a checkmark to its right. Underneath these, there are two more fields: 'SMS Ref:' with the value 'PE1' and 'SMS Value:' with an empty input field. At the bottom right are two buttons: 'Login' and 'Cancel'.



Password helpers

Create memorizable passwords
Rate passwords
Auto-fill forms
Store passwords encrypted
Store in DataSafe



Discussion

Where did you see the lack of usability in security?



Literature

- <http://simson.net/ref/2009/2009-10-29-HCI-SEC.pdf>
- <http://cacm.acm.org/magazines/2009/11/48419-usable-security-how-to-get-it/fulltext>
- <http://oreilly.com/catalog/9780596008277>





DataInherit
Preserve what matters.

Questions?

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