Today

Essay topics

Talk about trust

Essay topics

- 1. "Definition for Usable security". Whitten and Tygar aimed at a definition for usable security in their paper Why Johnny Can't Encrypt. Make a literature survey on more recent related work to compare, abandon or extend their original definition.
- 2. "Why is privacy management so hard?" With Facebook and Google Buzz, just to name two examples, we have seen that maintaining one's privacy online can indeed be tricky. On basis of recent work in this area, discuss these challenges and the current aims to tackle them.
- 3. "Better privacy management" on basis of related work and your own analysis, redesign the privacy management for an online service you know well. First present the service and issues related to its current privacy management, then proceed with the redesign.
- 4. "Trust principles today". In the course, two sets of design principles to create trust online were presented. These works came out already around 2000. On basis of new work since then, discuss how relevant these works are today and what kind of new design principles have been proposed since.
- 5. "Usable security and social networking". Users are involved more and more intensely in interactions online through social networking tools. Discuss the challenges and novel demands to creating usable security due to the emergence of social networking tools.
- 6. "Usable security a case study". Select a service or product that somehow involves security and analyse its usability against course material and other related work as you see fit. You can also make a case study on a security product/service.
- 7. "Identity online". Identity theft has become a major problem in the Intenet. Discuss the different issues related and present an overview of interesting work in this area.
- 8. "Why we fall for Phishing". Users are susceptible to online scams where they end up losing private information and/or money. Why do users fall for these scams? Discuss the issue on basis of relevant work in the area.
- 9. "New ways to authenticate". Users tend to do badly when it comes to remembering good passwords. Why? Here you can either 1) discuss the human side, why users are bad at passwords and cite relevant work in the area or b) present work that aims at developing new ways to authenticate users that go beyond traditional passwords (e.g. graphical passmeans).
- 10. "How to study usable security?". Present how usable security has been studied since the classics through a selection of papers that you consider good (or bad). What is missing? What could be improved?
- 11. = your own topic

Additional slide

Essays

- ...need not be written in a rigid scientific manner they can be more free-form, thus name "essay"
 - You can also express opinions as part of the essay
 - You need not back up every claim in the scientific manner as in scientific papers
- Can take the form of a literature survey, case study or design exercise – or a research paper. It's up to you!
- The templates are taken from CHI2011 conference work-in-progress category and may include some directions on the length – ignore these, the length is 8-10 pages.
- The idea of the template is to have equivalent length for the papers (and to learn to use such templates).
- I'll add some 3-4 references for each lecture topic in Noppa to get you started. These can be used for getting started with the topics (but you do not have to use them).

Practicalities

- Select your topic by sending email to me (kristiina.karvonen@hiit.fi) by 8.2.2011
- If you select your own topic, wait for confirmation from me
- 8-10 pages (templates available on Noppa)
- Returned by 30.4.2011
- Represents 50% of your course grade.

What we mean when we talk about trust?

T-110.5220 Information Security and Usability

Trust is needed for all transactions online

- money
- private information
- social interactions

A cornerstone of usable security!

Without trust there are less or no transactions

-> what is trust?

Here's a (famous) example on what happens when people actually mention trust

"Sledge Hammer defusing a nuclear bomb"

http://www.youtube.com/watch?v=XGoU7urNTbI

So trust is...

- ...often suspicious when expressed explicitly
- ...expressed more through **behaviour** than words (actions vs. speech acts)
- ...experience-based
- ...learned attitude (trust vs. distrust)
- ...hard to express in words
- ...trust acts can be different in different cultures.

Trust ...

- ...is needed when not all relevant information is known to make decisions.
- ...is needed to make many (if not indeed most) decisions.
- ...enables decision-making and thus, action.
- ...partly rational and partly irrational ("gut feeling")
- ...sometimes falsely based.

Trusting - Lying

Let's go back to Mr. Hammer.

"Sledge Hammer clips", time 4:16 - 4:41

http://www.youtube.com/watch?v=pFh09hF6qIA

Can you detect a lie?

Choose a person next to you whom you don't know too well

Tell each other some 4-5 things about yourself...

...with one lie within.

Can you detect the lie?

Why lies go undetected?

- Trust makes life easier. Think of traffic, traffic lights, and people on the street.
- If you can't trust others to (mostly) obey the rules of civil society, you can't leave home.
- Trust vs. distrust as basic approach to life (and other people): unsuspecting vs. suspecting attitude towards others.
- The suspecting may be helpful, but life may also get trickier this way in the overall picture.
- And, of course, there are the used cars salesmen and the whole thing called "Social engineering", and wanting to believe good things.

Two classical works on trust

Jakob Nielsen:

Trust or Bust: Communicating
 Trustworthiness in Web Design + Ecommerce
 User Experience Study 1999-2000

Cheskin Research & Studio Archetype/Sapient:

– eCommerce Trust Study 1999

Jakob Nielsen





The usability "guru" from www.nngroup.com (yes, it's him again)

Says: "Lack of trust" is the current climate on the Web

Claims: Web = a low-trust society

Preaches: Creating trust is the key to success

Aims at: Trust should be enhanced, but how?

Ingredients of trust according to Nielsen

Trust is formed through experience

Trust is a long-term proposition

Trust is hard to build and easy to lose

Trustworthiness can be communicated through use of seals of approval, brand reputation, appropriate use of technology, and through design

Good ecommerce user experience à la Nielsen

- 1. If customers can't find it, they can't buy it.
- **2.** Make customers feel at home on the home page.
- **3.** Create a smooth path to buying (navigation).
- 4. Help customers successfully search (search boxes).
- **5.** Present good product pages.
- **6.** Write for the web.
- **7.** Cross-sell, don't over-promote.
- 8. Make it fast.
- 9. Optimize shopping carts.
- 10. Ensure a trustworthy design.
- 11. Provide e-mail contacts.
- **12.** Test the experience.
- **13.** Prepare for success.

Trustworthy Design by Nielsen

Design quality

Up-front disclosure

Comprehensive, correct, and current information

Connected to the rest of the Web

Giving users a feeling of being in control and

knowing what is happening

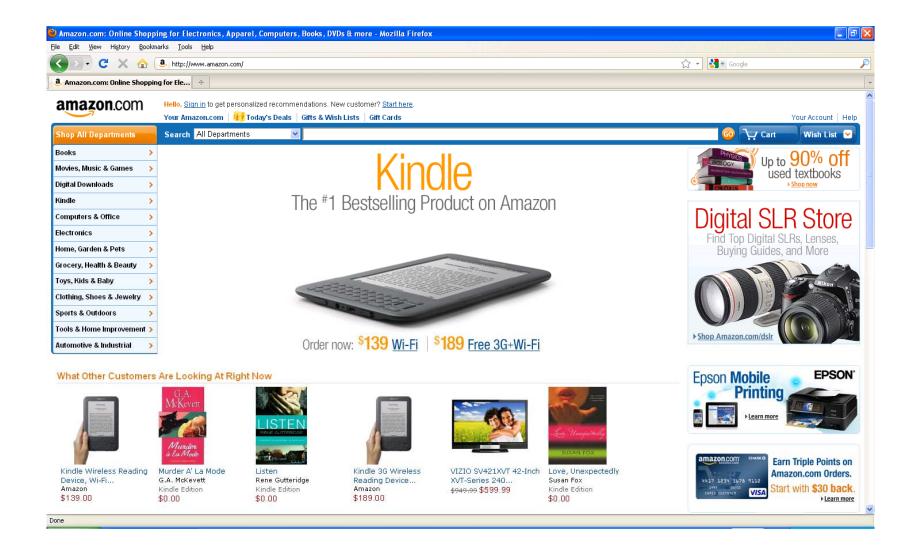
Good sites:

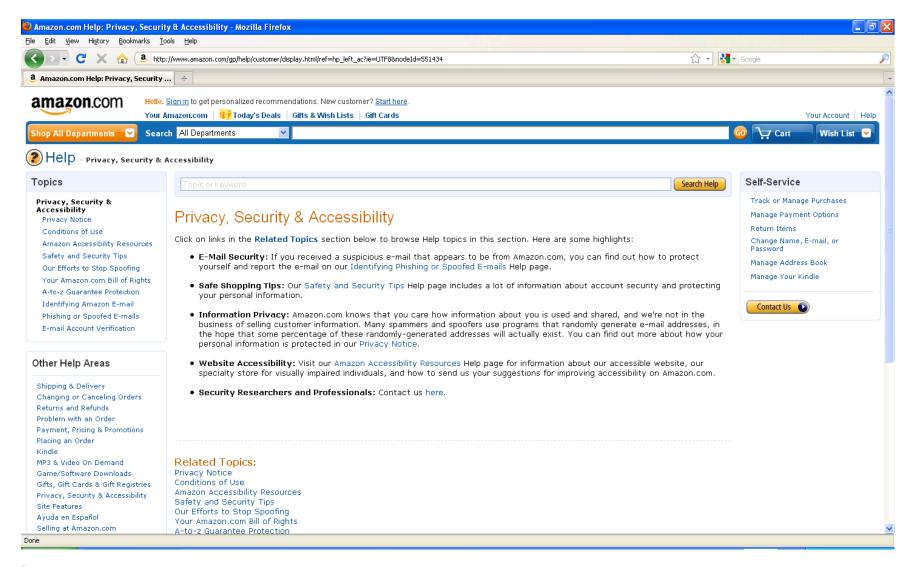
www.google.com

www.amazon.com

"if these guys can't even design a website, then can I trust them with my money?"

"If I order something, will the product be messy as well?"



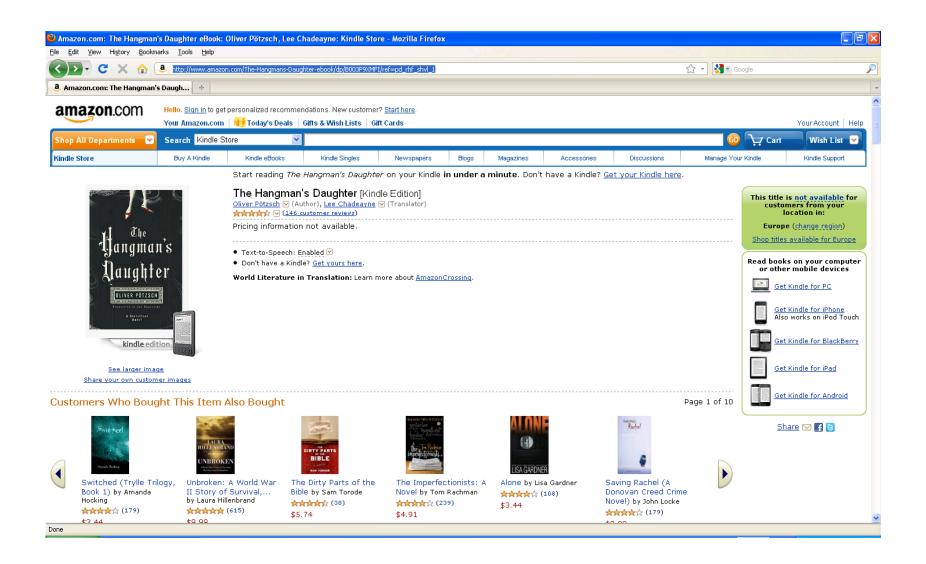


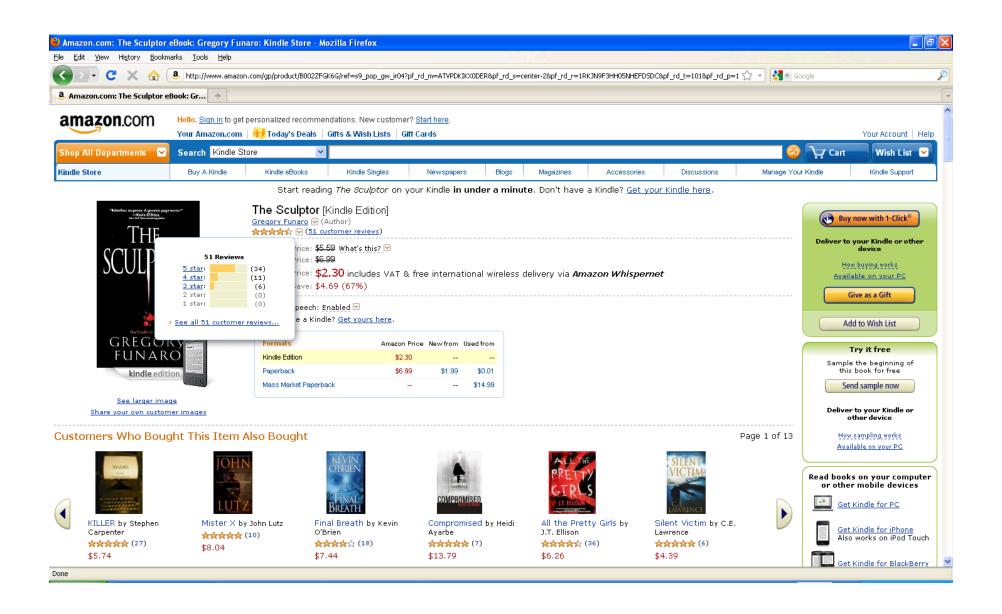
Safety and security tips section:

http://www.amazon.com/gp/help/customer/display.html?nodeld=10412241

Privacy notice:

http://www.amazon.com/gp/help/customer/display.html/ref=footer_privacy?ie=UTF8&nodeId=468496





amazon.com

Cheskin Research & Studio Archetype/Sapient -eCommerce Trust Study

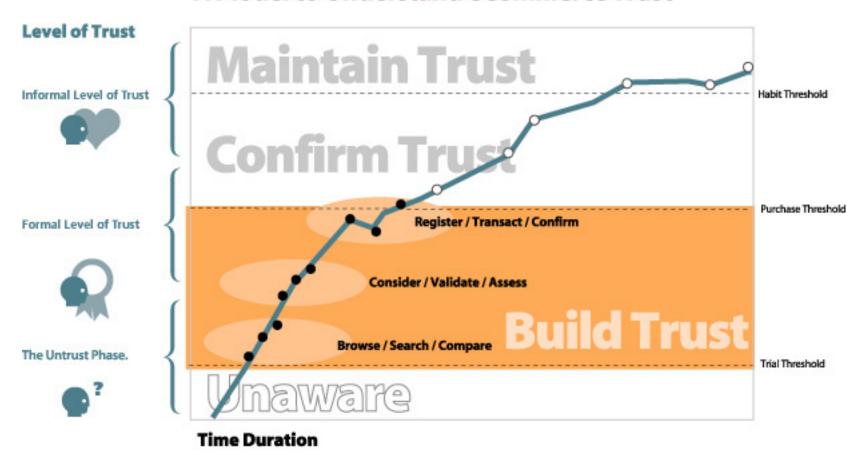
- What is trustworthiness?
- What are the components of e-commerce trust?
- How does e-commerce trust develop?
- What is the relative importance of some of the key components in communicating trustworthiness?

http://www.cheskin.com/view_articles.php?id=17

Research methodology

- qualitative questionnaires
- site review and analysis
- expert opinions
- consumer opinions

A Model to Understand eCommerce Trust



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Outcomes

Trust is **formed slowly**, as a function of time **Feeling of control** forms the basis for trust

Trust is a **dynamic** process

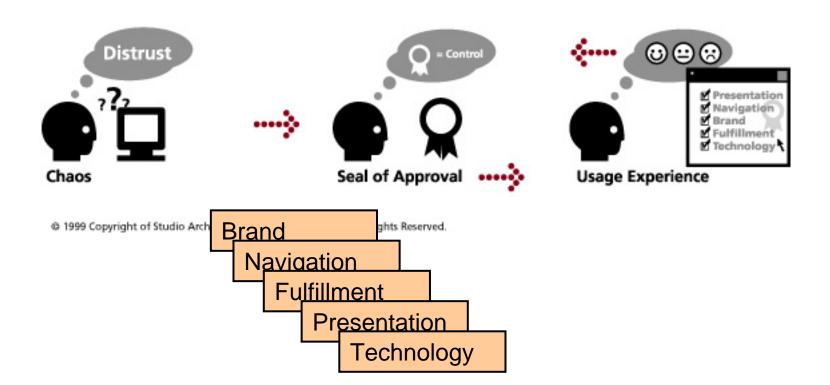
Trust is **experience-based**

Trust starts with "indications" (manners, professionalism and sensitivity) and may develop into "character traits" (dependability, reliability, honesty)

Trust enhances informal behaviour Personal control over personal information

How is Trust Formed?

A Model to Understand eCommerce Trust



1/6 Seals of approval

WebTrust

Information given by other companies that specialise in assuring the safety of Web sites: Verisign, TRUSTe, BBB
 Online, Webtrust etc.





! Later studies:



 seal programs were found to have greater influence over consumers who are more apprehensive about online shopping, than those who are generally less apprehensive.

word-of-mouth forums compete with seals

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Client **SUCCESS STORIES**

Web Demo

Name:

cover story, <u>Close the Deal</u>, talks about the growing awareness that execution and follow-through with regard to leads for new business require a structured approach.

July 10, 2005 ::: BizActions in Practical Accountant

BizActions and one of our favorite clients, Robert Gold of Bennett Gold Chartered Accountants are featured in the latest edition of the Practical Accountant. We're included in a story about the importance of using customized communications to increase response rates.

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The Confidentiality Principle addresses information designated as confidential and obtained online from existing and potential business partners. The criteria include requirements that:

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- the entity discloses its practices relating to the manner in which it provides for authorized access to, and uses and shares information designated as confidential,
- the entity uses procedures to achieve its documented confidentiality objectives in accordance with its defined policies, and

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NFL SITES

NFL On Location Corp./Fan Hospitality America's Game International

Not full yet

N=F=L



Fullbacks Mack Strong and Mike Alstott have eight Pro Bowls between them, and according to Adam Schefter, they seem to think they have another season in them. Full Story

- 2007 Pro Bowl: 6 p.m. ET on Saturday, Feb. 10 (CBS)
- Schefter: One final Bowl for Barber | Practice begins
- Pro Bowl rosters: AFC | NFC | Schefter: Snubs | Index
- Fan information | Tickets on sale now | Security procedures







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TEAM

·HEADLINES

- ·Schefter: Cowboys tab Phillips as next head coach
- NFL game in London gets 500,000 ticket requests
- ·Bears fan to change name to Peyton Manning
- ·Colts-Bears draws No. 3 TV audience in U.S. history
- ·Chicago's Briggs, Kreutz to miss Pro Bowl | Taylor added
- · Bolts hire two assistants | S Kiel pleads guilty in drug case
- Transactions | More news

NFL SHOP

Shop all Colts Super Bowl XLI



NEL NETWORK Video Features



NFL Total Access: LaDainian Tomlinson and Lorenzo Neal



Cowboys QB Tony Romo interviewed on NFL Total Acces



Schefter



Former Bear Walter Payton on 'Fields of Glory'



A look at the Colts' victory celebration



Sights and sounds of Super Bo





Chargers: Hardwick is center of attention in Hawaii

Browns: Teammates laud Hickerson's election.

Maccaneers: Brooks extends Pro Bowl streak to 10

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- Judge: Colts have leg up with Dungy's fire still burning.
- · Super Bowl Judgements: Bears refuse to blame Mother Nature
- . Freeman: Dungy walks the walk, talks the (sincere) talk

NEL Join the Youth Around Fans Football the NFL Europe Vote Team

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Do you think players who played in the Super Bowl should play in the Pro Bowl a week later?

- O No
- O Yes

SUBMIT





Saints 27, Eagles 24

Colts 15, Ravens 6

More Highlights

America's Game



NFL Network counts down the best Super Bowl teams of all-time in "America's Game: The Super Bowl Champions.

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- 8 p.m. ET: <u>NFL Replay</u> Relive Super Bowl XLI

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- · America's Game final four teams
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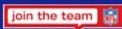
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Kids

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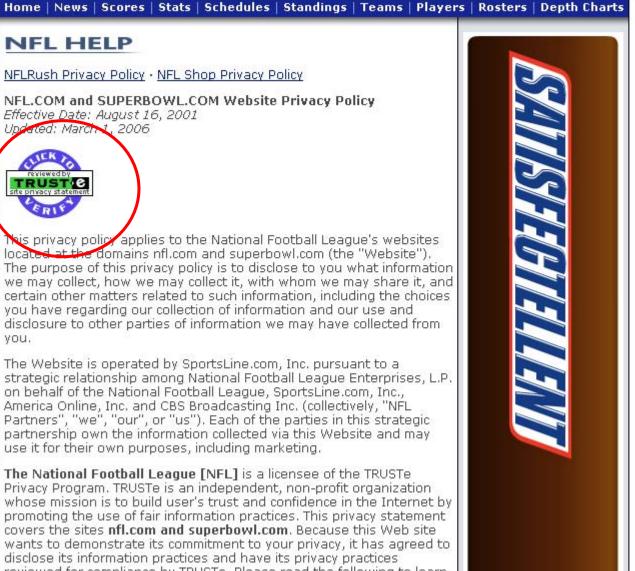
Updated: March 1, 2006



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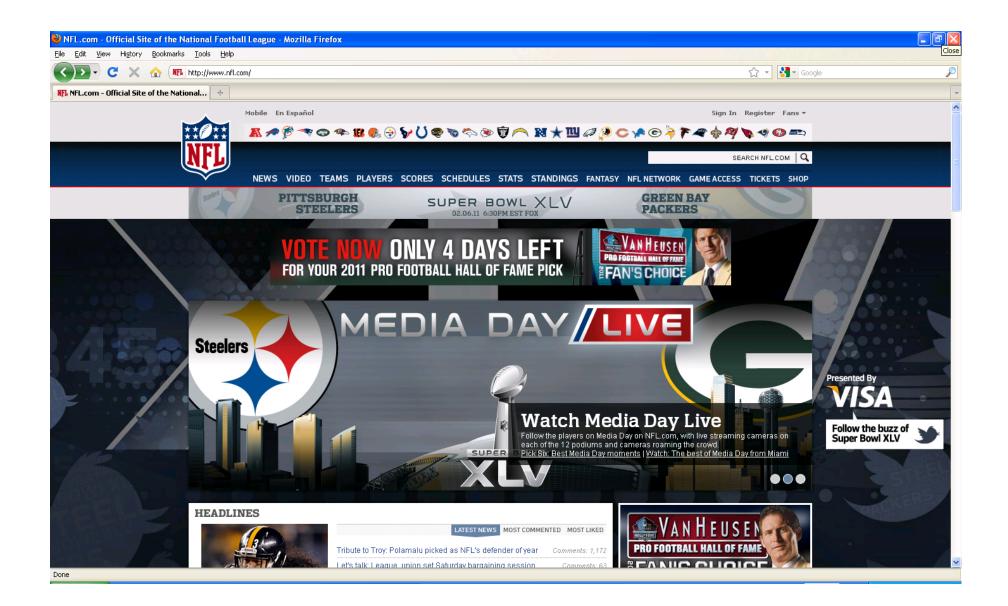
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forgot to pay the jets the rent for Jets stadium so they turned the lights off

Comment on: NYJ at CLE - 2010 Week





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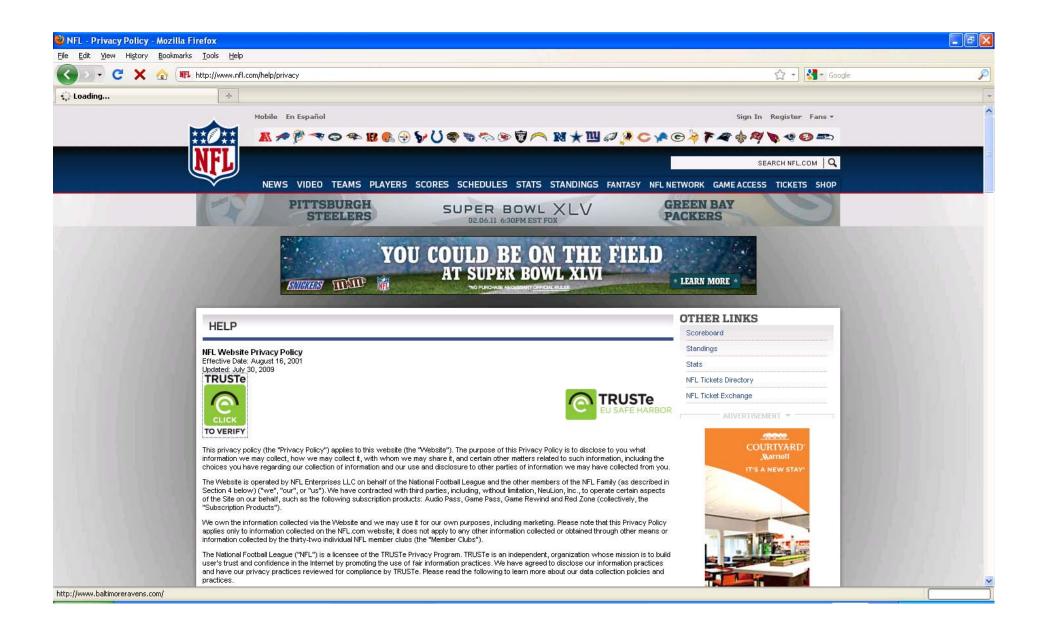


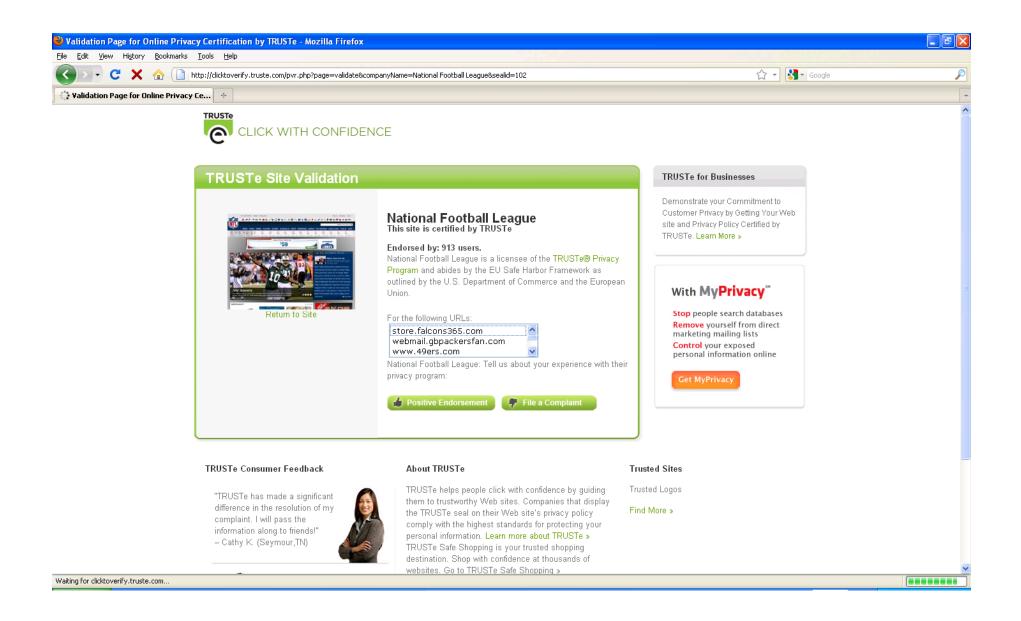
Cowboys Giants Eagles Redskins

Bears Falcons
Lions Panthers
Packers Saints
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www.nfl.com

2/6 Brand

Importance of the company's **reputation** in choosing to do business with them

- ...inside and outside the web
- E.g. Transferrable trust banks

Amazon.com: web-service more trusted even more than real-world services - brand matters more than medium

Companies who already have trusted brands, often **don't** participate in online seal programs

3/6 Navigation

The ease of finding what the visitor seeks for

- = VERY important!
- = Clarity
- = Access
- = Reinforcement (same style throughout the style for interactions and moving about)

4/6 Fulfillment

The process one works through from the time a purchase process is initiated until the product is received

Includes:

- protection of personal information
- tracking
- recourse (= help)
- return policy
- simplicity of process

5/6 Presentation

- = Ways in which the look of the site, in and of itself, communicates meaningful information to you
- = clarity of purpose
- = craftmanship
- = resembles other trusted sites

6/6 Technology

921

- = The ways in which the site technically functions
- = speed
- = new technical features, advanced technology...even at the cost of usability
- = VERY important: remember the extra buttons on the phones the users wanted (yes it's that guy Norman again)

Now let's select a site to analyse?

Signs for distrustworthiness?

- The elements of trustworthiness are missing
 - Typos, not linked, unclear...
- Security indicators
- ...but with Phishing you often copy a site and then the site does have the trust elements, too.

Next time 8.2.2011

- Privacy
- Selection of topics for essays made at the latest