

DSSN Praktikum

WiSe 2014/2015

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AKSW/Betriebliche Informationssysteme

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DSSN Praktikum

Natanael Arndt
und Dr. Michael
Martin

State of the Web

The Web is Shrinking
40%@facebook
Walled Gardens
Decentralized WWW
Risks

What is DSSN and Xodx

DSSN
Xodx
Xodx – Screenshot
Xodx – Overview

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Done so Far – Freedom Box
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State of the Web

The Web is Shrinking

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What is DSSN and Xodx

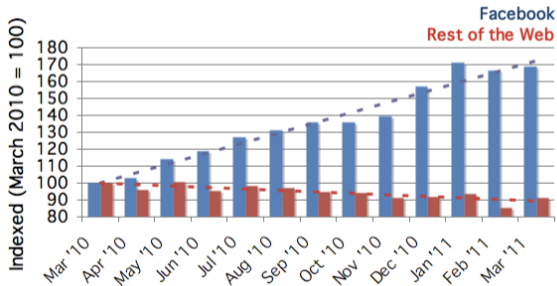
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Why Media Companies Must Embrace Facebook

Consumption in Total Minutes of U.S. Web Use (Indexed)

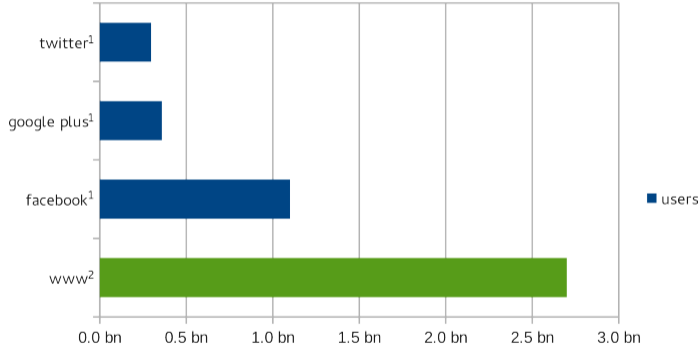


Source: Ben Elowitz, Wetpaint / comScore

State of the Web

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Users in Social Networks in relation to the total users of the WWW



Source:

1: <http://www.heise.de/newsticker/meldung/Google-hat-360-Millionen-aktive-Nutzer-1855169.html>

2: http://www.bitkom.org/de/presse/30739_76028.aspx

State of the Web

Walled Gardens

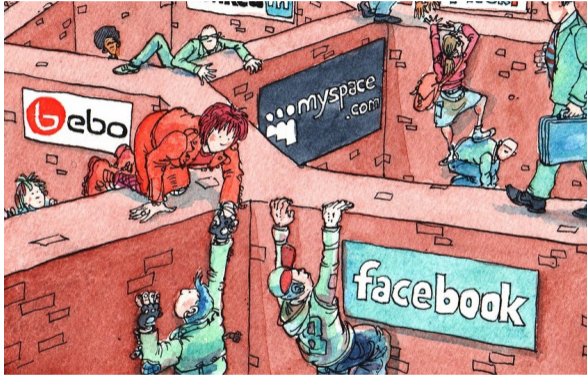


Illustration by David Simonds, via Design Issues: Socially Aware Cloud Storage (by Tim Berners-Lee - August 2009): <http://www.w3.org/DesignIssues/CloudStorage.html>

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Decentralized WWW

- ▶ This contrasts with the architecture of the WWW as a **decentralized network** of **many computer nodes** as it is described by Berners-Lee et. al. 1992 in “World-Wide Web: The Information Universe”

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Risks

A centralized network is a single point of failure and attack, which involves the risk of ...

- ▶ losing availability and reliability
- ▶ losing data ownership
- ▶ losing freedom of speech
- ▶ losing privacy

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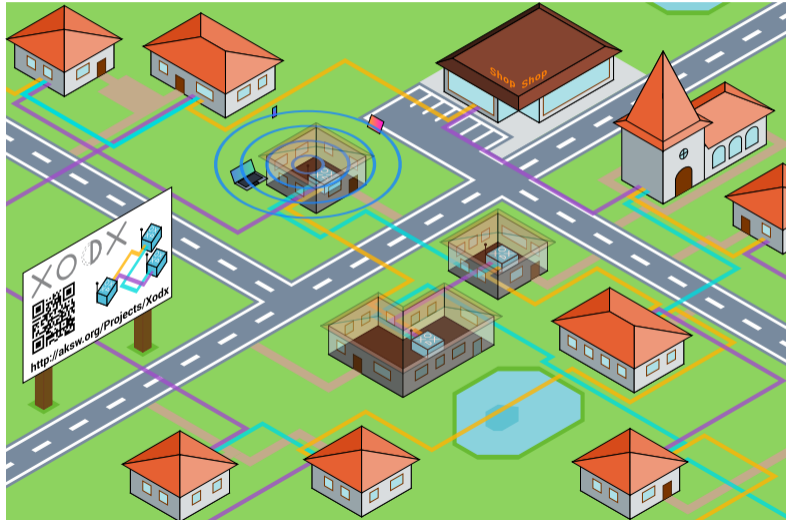
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DSSN



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DSSN

The DSSN is the idea of ...

- ▶ a distributed social network
- ▶ using open web communication technology
- ▶ HTTP, (Semantic-)Pingback, Activity Streams
- ▶ describing all data with RDF and publishing it as Linked Data

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What is DSSN and Xodx

Xodx

Xodx is an implementation of a DSSN node

It provides:

- ▶ Profile hosting and editor
- ▶ Publishing status messages
- ▶ Sending and receiving contact requests (Friending)

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Xodx – Screenshot

The screenshot shows the Xodx user profile for Natanael Arndt. At the top, there is a navigation bar with the Xodx logo, the user's name 'natanael', and links for 'List All Profiles', 'Profile Editor', and 'Logout'. Below the navigation bar is a profile picture of a man with a beard. To the right of the profile picture is a 'Show Activity Feed' button. The main heading is 'Hello Natanael Arndt'. Below this are sections for 'Notifications' (stating 'There are no notifications for you') and 'Activities'. The 'Activities' section has tabs for 'Status', 'Link', and 'Photo'. A text input field contains the text 'Taking a screenshot for Xodx poster ...' and a 'Post' button is below it. The activity feed shows two posts by Natanael Arndt, both marked as 'posted'. The first post is 'Just finishing Xodx demo paper for ISWC at 2014-07-18T09:06:44+02:00' and the second is 'Just writing Xodx demo paper for ISWC at 2014-07-18T08:42:22+02:00'. To the right of the profile, there is a 'Friends' section with an 'Add a Friends URI' input field and an 'Add' button. Below this is a list of friends: Prof. Dr. Thomas Riechert (http://aksw.org/ThomasRiechert), Norman Radtke (http://comiles.eu/splatte.rdf#me), Philipp Frischmuth (http://aksw.org/PhilippFrischmuth), Norman Heino (http://aksw.org/NormanHeino), and Sebastian Tramp (http://sebastian.tramp.name).

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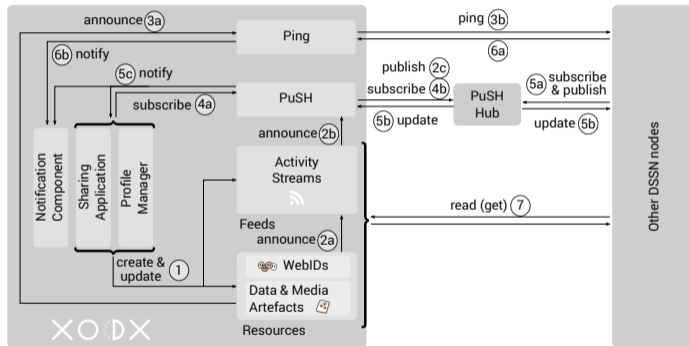
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- ▶ Last DSSNs objective was to build a FreedomBox Setup
- ▶ Setup on low powered ARM Hardware
- ▶ Implementing dsn.js
- ▶ Implementing and testing Xodx
- ▶ <https://wiki.debian.org/FreedomBox/UniLeipzigPractical>

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- ▶ Simulating a large DSSN with Docker
- ▶ Evaluating the performance and capabilities of this network

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- ▶ Xodx Docker Image erzeugen mit virtuoso orchestrierung
- ▶ PubSubHubbub Hub Docker Image erzeugen
- ▶ Corpus mit live Daten finden oder erzeugen
- ▶ Replay Infrastruktur entwerfen und aufbauen
- ▶ Replay Agent entwerfen und implementieren (Bot)
- ▶ Statistik Komponente entwerfen und implementieren.
- ▶ evtl. Statistik und Netzwerk Visualisierung

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- ▶ Prüfungsvorleistung oder Praktikumsmodul
- ▶ 4 Hackatons
- ▶ Dazwischen Selbststudium / Coding in Gruppen
- ▶ PlugComputer in begrenztem Umfang vorhanden
- ▶ SSH Zugang zur Docker Maschine: 139.18.8.34

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- 27.10. Einführung mit Vorstellung der Aufgaben (1. Hackaton)
- 10.11. 2. Hackaton
- 8.12. 3. Hackaton
- 12.1. 4. Hackaton
- 2.2. Präsentation der erledigten Aufgaben

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Practical List w14.bis.dssnp@lists.informatik.uni-leipzig.de

Einschreibung <https://olat.informatik.uni-leipzig.de/url/BusinessGroup/56426498> or Paper List

DSSN <http://aksw.org/Projects/DSSN>

Xodx <http://aksw.org/Projects/Xodx>

Xodx@github <https://github.com/AKSW/xodx>

DSSN Paper Tramp et al. “An Architecture of a Distributed Semantic Social Network”

Xodx Poster Paper Arndt and Tramp “Xodx – A node for the Distributed Semantic Social Network”

Xodx Master's Thesis Arndt “Xodx – Konzeption und Implementierung eines Distributed Semantic Social Network Knotens”

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