



Libraries 2020

Current and Emerging Trends

- some examples -



Lehrstuhl für Pflanzenzüchtung
Technische Universität München



Neuro-Kopf Zentrum der TU München
Abteilung für Neuroradiologie

Institut für Geschichte & Ethik der
Medizin der TU München



eResearchUniversity

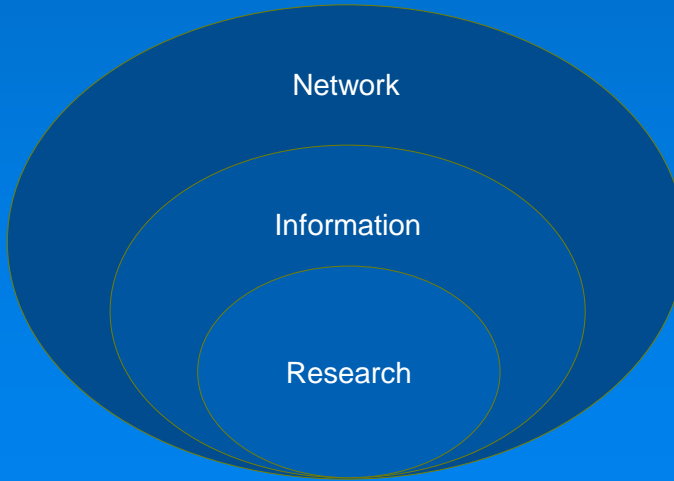
an integrated eResearch infrastructure
for universities



IT



NON-IT



TUM Workshop
19 Sept 2011
on e-Research Support



TUM Workshop
19 Sept 2011
on e-Research Support

Visualisation Primary data management

Document delivery services

Long term preservation

Global information networks

Data management support

Information discovery training

Automatic indexing of visual data

Quotability of unpublished data

Comprehensive communication

Data set based access control

Integrating portal

customizable

Liaison roles

Publishing support

Research group collaboration workbench

Alerting services

Bibliometrics

Linking files

WEB BASED USER INTERFACES

Standard protocol compliant: OAI, LDAP, Shibboleth, ...

digitization

Data streaming

Comprehensive collaboration

Version control

Mobile device software tools

Data mining

internet queries by sketches

Data provenance

Transliteracy training

Plagiarism prevention

Interfacing community tools

Cloud technologies

Virtual organisations

Redefining the Research Library for a New Era of Study

What do our (future) students want?

→ ■ Let's ask Abby!

- Online-library
- That learns what I like
- Multimedia
- Everything quick and easy
- Be able to add my own stuff
- Share other peoples' stuff
- Do it all from my iPhone or eBook reader

- More mashed up contents
- Semantic tagging
- Real time information
- Augmented reality
- Geospacial tagging
- Interactive touch screen

- AND I WANT IT NOW -

Communication and Interfacing

Mobile apps are no more the direct translation of the desktop/web applications to a mobile environment

Apps in the sense of iPhone or Android apps will dominate end user applications

web experience can be tied to physical locations, as with QR codes

increasingly users will be coming to the library expecting to use their own devices rather than the library's computers

more and more library technology infrastructure moves into the Cloud
WorldCat, IT system hosting

Augmented reality

Gb/s Networks throughout the world


Catalogues and search engines using semantic techniques, including blogs and social networks

Any kind of library alerts

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Communication and Interfacing – Ubiquitous Computing Mark Weiser 1991



1989: \$1500
33MHz, 20MIPS



2008: \$0.50
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Everything you can buy will have an embedded microchip able to interact with the rest of the world



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... creating the "Internet of Things"

Communication and Interfacing – The Internet of Things

In computing, the Internet of things, also known as the Internet of objects, refers to the networked interconnection of everyday objects. It is described as a self-configuring wireless network of sensors whose purpose would be to interconnect all things. The concept is attributed to the former Auto-ID Center, founded in 1999, based at the time at the Massachusetts Institute of Technology (MIT). Wikipedia

- Web 1.0 Universal Access to Knowledge
- Web 2.0 Universal Access to Communication Applications
- Web 3.0 Universal Access to Context
- Web x.x Universal Access to the World around us - Sensors

Communication and Interfacing – The Internet of Things – Spimes

David Orban <http://vimeo.com/8885011>

Spime is the name – coined by SF-author Bruce Sterling – of an object,

- knowing its own location in space and time (space and time → spime)
- having memory and computational capabilities
- containing some kind of sensors to perceive characteristics of themselves or the world around them

Currently: # cell phones ~ # human beings (~10⁹)

Very soon: # sensors in autonomous agents >> # human beings

Intel CTO Justin Rattner: „very soon we shall have a trillion nodes world-network (10¹⁸) around“

http://wn.com/Pervasive_computing

Communication and Interfacing – Spimes – already around

The beginnings of car-to-car communication: Volvo Distance Alert System  

We already have SMAVNET  

Spimes at home  

Spimes in a library

- books knowing and communicating when to be taken back to the library
- free chair making itself known to a meandering student – i.e. to his/her cell phone - looking for a place in the library

Data Management, Dissemination and Data Mining - Catalogues

Open catalogue

Visualisation of information spaces

<http://www.cs.umd.edu/hcil/west-legal/gridl/index.converted.html>

<http://www.visualthesaurus.com/>

Connection between our catalogues and 3D learning tools   

Library as Learning Environment

Information Literacy → Transliteracy

Transliteracy is the ability to read, write and interact across a range of platforms, tools and media from signing and orality through handwriting, print, TV, radio and film, to digital social networks www.transliteracy.com

Globalisation

- Language skills
- Collaboration between libraries
- Collaboration within the university/college/polytechnic/institution: embedded librarian

Transforming the user experience



Collection Development

Budget pressures

Preference for electronic access

Patron driven collection development models

Licensing issues  



... and much more!

Thank you for your attention!





Future mobile library services, e.g.

- room reservation on a mobile device
- computer availability service
- mobile instructions / video tours /audio tours
- read reviews others have left on items
- mobile versions of e-books
- mobile payment
- whole website in mobile friendly design
- find item with floor plans / maps of each library

BibQR

Joint Project
TUM Library + Informatics Chair for Cooperative Systems

QR-Code in OPAC



ISxN-Code



Manual query

- ISxN
- Lib-network ID
- Classification
- ...



Watchlist

- What do I want to check out?

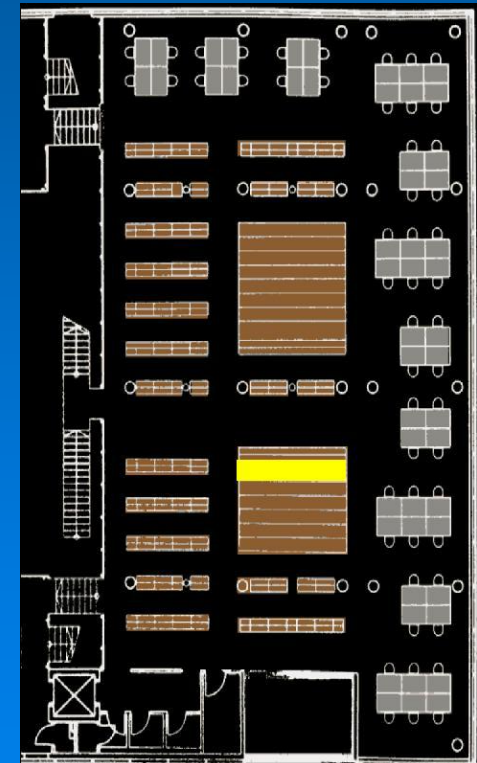
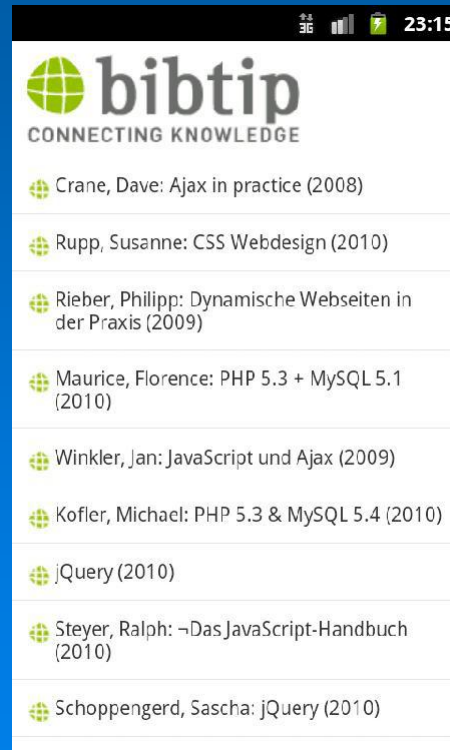
Navigation

- On which shelf do I find my book?

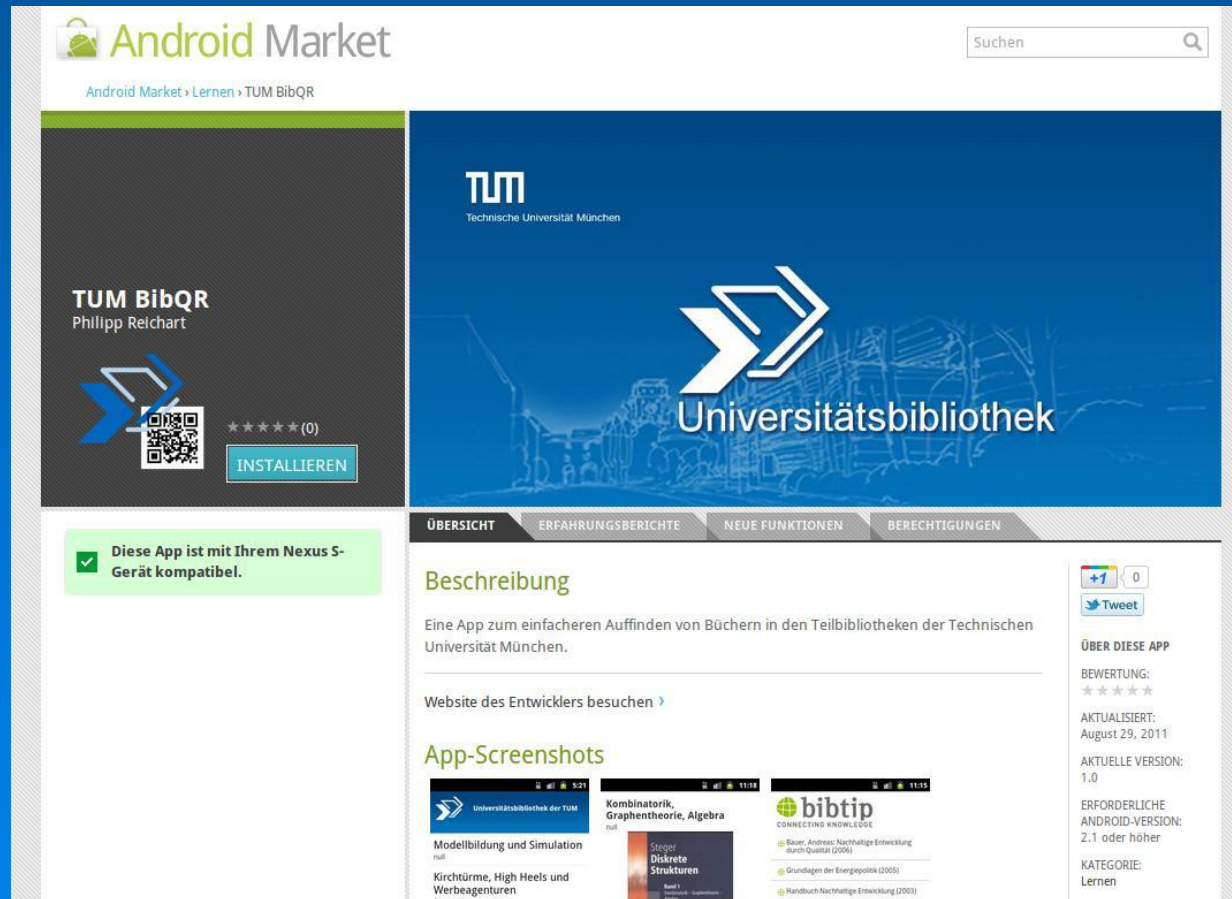
Extras

- Similar books in the library
- Book cover
- Google Books
- Amazon.com
- Recommender system

BibQR



BibQR



The screenshot shows the Google Play Store page for the 'TUM BibQR' app. The app is developed by Philipp Reichart and is currently in the 'Lernen' category. The page features a large blue header with the TUM logo and the text 'Technische Universität München' and 'Universitätsbibliothek'. Below the header, there is a section for the app's details, including a QR code, a five-star rating (0 reviews), and an 'INSTALLIEREN' button. A green banner indicates that the app is compatible with Nexus S devices. The 'Beschreibung' section states that the app is designed to simplify finding books in the university's libraries. Below the description, there are 'App-Screenshots' showing the app's interface on a mobile device, displaying book covers and search results. The right side of the page includes a 'Tweet' button, a 'BEWERTUNG' section with a five-star rating, and information about the app's update history and version requirements.

BibSocial – an OPAC extension

Joint Project

TUM Library + Informatics Chair for Cooperative Systems

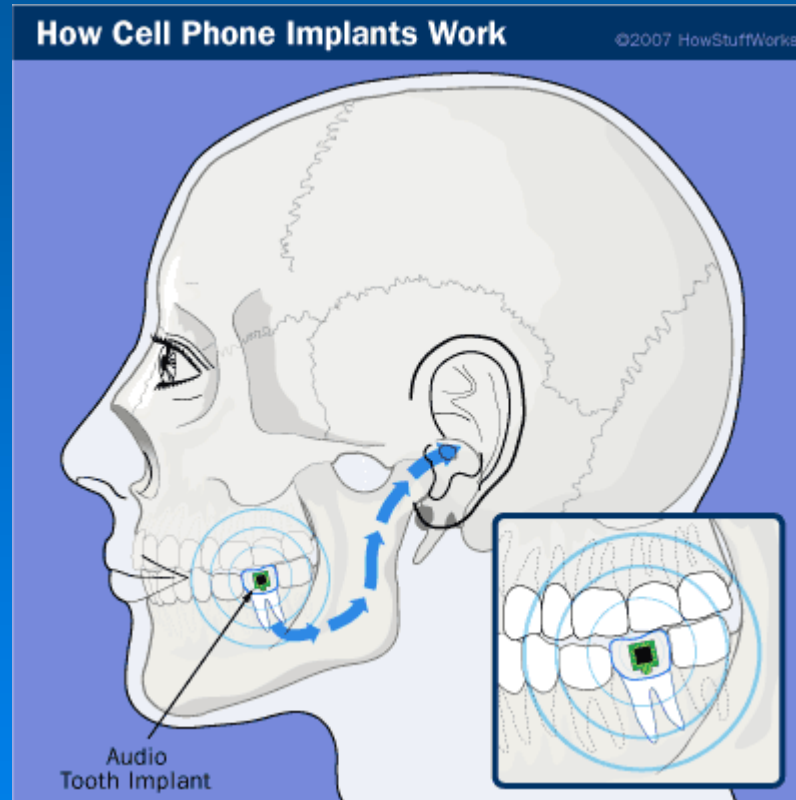
Faster access to the right book

- User feedback to books
- Evaluation of books by amazon like points system
- Option of abuse reporting

BibSocial

Exemplare	Ansehen / Bestellen	Vollanzeige	Rezensionen
<p>Durchschnittliche Bewertung: ★★★★★</p>			
<p>★★★★★ Simply Great! von Philipp Reichart, 14.09.2011 um 04:14:03 Missbrauch melden</p>			
<p>A wonderful book that taught me a lot about JQuery. :-)</p>			
<p>★★★☆☆ Not so good von Thomas Hentschel, 14.09.2011 um 04:14:03 Missbrauch melden</p>			
<p>Other books are better...</p>			
<p>★★★★★ Das Buch für DAS Javascript Framework von Christopher Hübner, 15.09.2011 um 00:34:54 Missbrauch melden</p>			
<p><i>4-mal editiert, zuletzt am 21.09.2011 um 14:31:39</i> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean euismod condimentum ante, sed luctus dolor lobortis vitae. Praesent sodales est a ligula fringilla tristique. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Proin sit amet justo ac metus adipiscing faucibus vitae dictum nulla. Ut venenatis leo quis est ornare sodales. Proin dignissim suscipit purus, eu venenatis est vehicula quis. Cras eget ipsum felis. Duis eget tincidunt magna. Curabitur nulla nibh, sodales eu sodales sed, laoreet vel est. Nullam lacus ante, auctor rutrum accumsan a, adipiscing nec enim. Proin ut risus sapien, sit amet auctor odio. Donec eu rutrum erat.</p> <p>Aenean gravida pharetra lobortis. Aliquam pretium, purus non auctor ultricies, nunc massa euismod velit, non dictum enim nisl eget orci. Nunc non eros velit, vitae rhoncus elit. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. In tempus scelerisque feugiat. Etiam hendrerit ante.</p>			
<p>★☆☆☆☆ ein andres Buch von Matthias Hellerer, 15.09.2011 um 21:42:35 Missbrauch melden</p>			
<p><i>1-mal editiert, zuletzt am 15.09.2011 um 21:42:45</i> Von wem ist eigentlich bibtip? scheint von bibtip.de zu kommen. Wer ist das? Und welche Daten erhalten die ueber mich?</p>			
<p>Rezension schreiben</p>			
<p>.....</p> <p style="text-align: center;">Rezensionserweiterung - Christopher Hübner - Revision 289 - 20110921-1823</p>			

2002 London Royal College of Art design – cell phone implant



RFID – we shall be safe and happy ?

