Realizing Digital Convergence

IS290-1: Fall 2004

a course provided by the joint efforts of:

[Logos of SIMS and CDTM]
Introduction
Basic Ideas

• Draw on the interests and expertise of SIMS and CDTM

• Expand areas of cooperation
  – Visiting student researchers (CDTM to SIMS) for past two years
  – Guest lectures, etc.
  – Potential for joint research projects
• Use interactive digital technologies in:
  – Development of the course
  – Delivery of the course
  – Project development
  – Project outcomes

• Matrix organization
  – Technology and platform teams
  – Content teams
Modules

• Case studies
  – Mobile services
  – Newspapers migrating to the web
• Lectures on industry, products and platforms
• Guest lectures:
  – Paul Grabowicz (UCB)
  – Konstantin Urban (Holtzbrinck Networxs)
• Product development

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Vision & Content

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[Images of logos for SIMS and CDTM]
What to do for content?

- We knew that we wanted the content to reflect some of the existing ‘New Media’ work happening with SIMS and its students.
Content Options

• Blogs
• Student Profiles
• Student Research Projects
• The Phone Project
• The Center for Document Engineering
• Garage Cinema Research

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[Logos and images]
• Since there are many students at SIMS that blog on a daily basis, we thought that this would be a great source of new exciting web content, that would be appropriate for a technical audience.

• But what else?
The Phone Project

- Many of the students in the Digital Convergence class have worked with Professor Marc Davis on the Mobile Media Metadata project. http://garage.sims.berkeley.edu/research.cfm

- This project is the supporting backend for the IS202 Phone Project http://www.sims.berkeley.edu/academics/courses/is202/f04/phone_project/index.html

- So we decided to highlight this unique project that all SIMS students participate in
Vision & Business Plan
We facilitate academic collaboration and practical insights across interdisciplinary domains in information technology through aggregating knowledge and distributing it via various media.
Opentech serves all individuals interested in digital technology in general and CDTM/SIMS students, alumni, faculty, and affiliates in particular.

Value proposition for…

… students: promotes their education through actively involving them hands-on in research and practical application of their field of study

… faculty: platform to pre-test ideas and to get students involved into their studies

… alumni/affiliates: platform to access ideas and people and to present own vision

… prospective students: gain access to insider information on school and program as well as the prospect of joining a vibrant academic community
Funding, Revenue & Costs

Initial funding and continuing support is provided by the institutions, industry partners & affiliates.

Funding:
• seed capital: $12,000 by CDTM alumni & sponsors
• acquire long-term “supporters” of the project that benefit from being associated with it

Revenues:
• advertising/classifieds in print issue generates ca. $2500
• long term: subscription fee and sale of content

Costs:
• $4,800 per issue (losses covered by CDTM alumni for the first 2 years)
• initial website hosting on SIMS servers
Opentech Print: Status and Outlook
Print issues

• Up to now trends in digital convergence did not link back to classical media
• Blogging, for example, so far exists only very limited as printed version
• Challenge is to benefit from digital media not only in the digital world but to find ways to use the content also for print, because print still important!
• This is why it was the challenge to not only integrate web and mobile, but to integrate it with “old-media”
• Concepts of how content can be used for print and how it shall be published had to be found.
Have a magazine from the CDTM – SIMS community with technology related articles, possibly with long term focus on the broad topic of digital convergence.

A magazine that brings blogging – mobile and internet based – to print.

A magazine which also can be used as a give-away for the institutions and which can illustrate research and activities at SIMS and CDTM.
The opentech magazine & webpage has the following focus:

- Gather technology trends in the area of converging technologies on a world wide basis (through SIMS and CDTM community spreaded throughout the world). The first issue collected trends from:
  - Berkeley
  - Munich
  - Singapore
  - Hong Kong
  - Tokyo
  - Boston

- Collect current research results from SIMS and CDTM community.
  - SIMS & CDTM students & researchers
  - Prof. Nikolaus Franke (University of Vienna)
  - Prof. Charles Weber (PSU)
  - Christiane Hipp & Mike Olson (Vodafone R&D US & Germany)
Print Magazine - Challenges

• User generated content saves a lot of resources
• Combined with a strong IT – system which allows to automatically transfer content into a magazine template (to reduce work on layout etc.) with fixed parameters for article lengths, number of pictures, etc. a magazine can be created very efficiently.
• However, on the other hand the question is how good the quality of the content is in the end
• Question is how much editorial work still is necessary when user-generated content automatically flows into a magazine template.
• Generally, quality control is needed since blogging content is often not ready to print
• Find easy-to-handle concepts to decide what of the blogging content to publish (e.g. voting, evaluation)
Content Management Systems

- Idea was to have a CMS that integrates Web, Print and mobile and creates output automatically for all channels
- Input and Output channels ready to use in all three channels
- Due to time constraints we eventually developed two CMS in parallel:
  - Drupal (Web & Mobile) - Berkeley
  - Just Click (Print & Mobile) – Germany
- For the future, it will be necessary to find a common basis, which means to link the CMS or migrate everything
Website Structure & Tools
• An open-source platform and content management system for building dynamic web sites
  – user administration
  – publishing workflow
  – discussion capabilities
  – news aggregation
  – XML publishing for content sharing purposes.

• Can support a diverse range of web projects ranging from personal weblogs to large community-driven sites.
The OpenTech site includes
- Articles by SIMS and CDTM students
- News feeds from student and professor blogs
- Discussion forums
- Polls
- Events Calendar
- Photo publishing via MMS
The Convergence of Print Media and Mobile Technologies – an increasingly observable phenomenon – gave rise to several new media concepts and a change in the nature and sequence of the traditional media (print) value chain stakeholders. Content is not necessarily generated by professional journalists anymore and the way content is presented to readers does often vary dramatically, too.

Mobile devices as well as websites serve as novel content vehicles and allow for the aforementioned user integration in content generation on a real-time basis. State of the art media services comprehend interactive features such as voting options (SMS, Email) or the editorial integration of users via SMS, MMS, Email, and (web or mobile) blogging. This consequently implies new user interfaces in the distribution of content that allow for the bundling and recycling of content. These trends change the cost structure of media business operations. A minimization of editorial expenses is possible and with a standardization of input tools for user generated content further savings can be achieved. In the print business one example hereby is the “JustClick” Software by Gogol Medien that standardizes and predefines the layout of print media products. As an
Felix is looking at toolkits for user innovation. He observed, that for more radical innovations, toolkits are often too rigid. His objective is to find out how that limitation can be overcome by enabling horizontal adaptation of toolkits, in a way, that a user can integrate external functionality.

Check out prototyping
 Probably the notion of trial-and-error problem solving. Isn't what you are doing a form of prototyping?
 Also modularization (in the business context) should be an interesting concept for your studies.

Matthias Möller
Researcher CDTM
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**sources**

**danah boyd (SIMS PhD)**

- add - another dissertation distraction 18 hours 34 min old
- finals productivity pack 21 hours 1 min old
- Cobot and Data that Matters 1 day 15 hours old

**Sean Savage (SIMS Masters)**

- SNOCAP: Morphine for the Dying 5 days 13 hours old
- LoJack for the Rest of Us 7 weeks 12 hours old
- TV-B-Gone 7 weeks 1 day old

**Joe Hall (SIMS PhD)**

- Feeling Accepted... 13 hours 38 min old
- Dates to Remember for Cocktail Parties (or Our Final Exam in 'Quality of Information') 18 hours 24 min old
- Don't Bogart that Serial... 21 hours 21 min old

**Nancy Van House (SIMS Prof.)**

- Sorry everybody Update 3 days 14 hours old
- Commenting Glitch 3 days 14 hours old
- Unclear on the Concept (Again) 3 days 14 hours old

**Doug Tygar (SIMS Prof.)**

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**shane**

- blogs
- create content
- my account
- blog aggregator
- sources
  - Doug Tygar (SIMS Prof.)
  - Joe Hall (SIMS PhD)
  - Nancy Van House (SIMS Prof.)
  - Ryan Shaw (SIMS Masters)
  - Sean Savage (SIMS Masters)
  - danah boyd (SIMS PhD)

**Who's online**

There are currently 1 user and 0 guests online.

**Online users:**

- shane

**Chatbox**

The chatbox is empty
What’s next

• Need to integrate web and print content via JustClick
  – Develop interface between Drupal CMS and JustClick
Drupal: Behind the Scenes
Technology Behind the Site

• Webserver
  – Apache
• Dynamic language
  – PHP
• Database
  – MySQL
• The glue: Drupal modules
  – Connect to RSS, weather feeds, MySQL etc…
http://dream.sims.berkeley.edu/~philip/drupal-4.5.1/
Lots of URL Processing

- The key to this working is processing the URL for the desired page.
- Dream.sims…/~philip/drupal/?q=eventCalender
- Dream.sims…/~philip/drupal/?q=chatBox&autoLaunch=1
Technology Flow

Drupal installed modules

- Chat
- Weather
- Blog
- RSS
- Calendar
- Image Gallery

PHP

MySQL

Drupal Index

Apache

Internet

- Dream.sims.../~philip/drupal/?q=eventCalender
Mobile Media Tools
Media Convergence Framework

REALIZING DIGITAL CONVERGENCE

Content

CMS
(JustClick)

Drupal

Print

Web

Mobile

Modules

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sims

CDTM TUM LMU
Mobile Media Tools: Send SMS

Send text messages to any U.S. cell phone

- Mobile Number: ex. 8585555555
- Sender: Name or Phone Number
- Service Provider: I Don't Know
- Your Message:

Characters Remaining: 140

Submit

Navigation
- blogs
- blog aggregator

Syndicate
- XML

Who's online
There are currently 0 users and 1 guest online.

Upcoming events
more

Poll
Do you use Wikis?
Mobile Media Tools: Moblog

Moblog your photos to Open Tech website
1. Create an account on this site.
2. Either set your email address as the address that your phone sends from, or setup an email alias in your "my account" section.
3. Create a message on your device (image, video, text, whatever).
4. Email it to opentech@jcscape.com
5. Wait...(shouldn't be more than 10 mins or so)...
6. Look at your "my blog" page.
(note: you must have T-Mobile as your service provider)

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powered by Drupal
Participants & Concluding Comments
The Class

• SIMS & UCB
  – Shane Ahern
  – Alison Billings
  – Jeff Decker
  – Andrea LaPietra
  – Dan Perkel
  – Hong Qu
  – Ryan Shaw

• CDTM @ SIMS
  – Felix Frank
  – Bernhard Kirchmair
  – Philip Mayrhofer
  – Albert Schaber

• SUPPORT
  – Patrick Riley
  – Kevin & staff
The Class

• CDTM @ CDTM
  – Silvia Appelt
  – Frank Danziger
  – Nikolaus Konrad
  – Johannes Martens
  – Inken Nonnenmann
  – Ernst Sassen
  – Joerg Schmidl
  – Erich Schubert
  – Yiming Sun
  – Sebastian Wernicke

• CDTM Faculty & TAs
  – Prof. Dietmar Harhoff
  – Prof. Thomas Hess
  – Peter Dornbusch
  – Martin Huber
  – Jonathan Landgrebe
  – Maximilian Zuenadt