



Realizing Digital Convergence

IS290-1: Fall 2004

a course provided by the joint efforts of :





Introduction

a course provided by the joint efforts of :



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

Process



- 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**

*Today's
Focus*



Vision & Content

a course provided by the joint efforts of :



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

Student Blogs



- 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

a course provided by the joint efforts of :



Vision



We facilitate academic collaboration and practical insights across interdisciplinary domains in information technology through aggregating knowledge and distributing it via various media.

Market



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.

Print Magazine - Vision

- 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

report | An Exciting Entrepreneurial
Transatlantic Project

Matthias Müller
Jonathan Landgebe
Martin Häber



Participating students and faculty

While Germany struggles to reform the university system, Yale Braustein, Professor at the School for Information Management and Systems (SIMS) at the UC Berkeley, and the Management Team of the Center for Digital Technology and Management (CDTM) of LMU and TU Munich attempted what no other university had ever tried before: To realize a transatlantic product development course and come up with a live product in four days.

During four days and nights an interdisciplinary team of students and researchers in Berkeley and Munich lived through the entrepreneurial life cycle of product development, business planning, and entrepreneurial marketing. Jointly they realized a multiple media magazine including print, mobile and web channel in order

to demonstrate the potential of converging technologies for the media industry.

Together with Prof. Dietmar Harhoff and Prof. Thomas Hess, Scientific Directors of CDTM they put up the framework to offer a course about how new media companies react to online business with a special focus on mobile technologies. Students learned in a series of lectures how to analyze the business and journalistic challenges of converged print-online-mobile publications to identify the critical strategic issues in new media publishing.

The unique feature of this course was a "do-it-yourself-case study" over 4 full days, based on an innovative software-platform of Gogol-Metka, a small German media company publishing regional magazines in Bavaria, ideas were

developed and implemented on how mobile technologies can be integrated with on-line- and print-journalism.

The project ended with the first issue of a magazine that integrates internet and mobile technology and of which you hold the printed part in your hands.

Thanks to the interdisciplinary competencies of SIMS and CDTM students it was possible that the development phase could deal with technological issues, revenue model issues, and the realization of the whole concept. Content for the multichannel magazine comes out of the SIMS and CDTM communities, covering projects and research at both locations. The infrastructure allows everyone to include own content easily.

Communicating Research & Trends



- 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

Drupal



- 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.

Features Implemented



- 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

User login

Username:

Password:

- [Create new account](#)
- [Request new password](#)

Latest Articles

- [A Business Case for the SIMS CDTM OpenTech Magazine](#)
- [How to develop products for non-existing markets?](#)
- [User Communities in Commercial Contexts](#)
- [Bernhard's Research](#)

Home » forums

Outlook on "State of the Art" Media Concepts



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 web sites 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

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?

Love em!



17%

Can't get enough of Wikis



Latest Articles

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[more](#)

danah boyd (SIMS PhD)

- add - another dissertation distraction
- finals productivity pack
- Cobot and Data that Matters
- a question for you...
- objections from native bloggers

[more](#)

Sean Savage (SIMS Masters)

- SNOCAP: Morphine for the Dying
- LoJack for the Rest of Us
- TV-B-Gone

Felix's Research



Horizontal Adaptation of Toolkits for User Innovation

Felix is looking on 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.

By ff_user at 2004-11-14 00:26 | [Research Discussion](#) | [add new comment](#) | [previous forum topic](#) | [next forum topic](#)

Comment viewing options

[Threaded list - expanded](#) [Date - newest first](#) [50 comments per page](#)

Select your preferred way to display the comments and click "Save settings" to activate your changes.

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

shane

- [blogs](#)
- [create content](#)
- [my account](#)
- [blog aggregator](#)
- [image](#)
- [log out](#)

Who's online

There is currently 1 user and 1 guest online.

Online users:

- [shane](#)

Chatbox

The chatbox is empty

[\[join the chatbox \]](#)

Upcoming events

[more](#)

Poll

Do you use Wikis?:

- Love em!
- Can't get enough of Wikis
- Only the Wikipedia
- Wiki is a waste of time

Latest Articles

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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

[more](#)

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

[more](#)

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

[more](#)

Nancy Van House (SIMS Prof.)

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

[more](#)

Doug Tygar (SIMS Prof.)

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)
- image
- log out

Who's online

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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

a course provided by the joint efforts of :



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/

opentech



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more

danah boyd (SIMS PhD)

Image_03.jpg



By shane at 2004-12-07 04:06 | fun | original image | fun image gallery

Image_04.jpg



By shane at 2004-12-07 04:06 | fun | original image | fun image gallery

The Phone Project and MMM turn first year SIMS students into mobile media producers

by Alison Billings

For the last two years the SIMS introductory course IS 202, Information Organization and Retrieval, has been using an innovative project to illustrate different techniques of organizing information. The course taught by Professors Ray Larson and Marc Davis gives students first hand experience in the processes required to create an effective Information Organizational and Retrieval system.

The project uses mobile camera phones (very generously donated by Nokia with service from AT&T wireless) and the Mobile Media Metadata (MMM) platform developed by Professor Davis' research group, as a base for the project. The class is divided into groups based on the student's skill sets, and they are tasked with coming up with ideas for an application that they would find useful as Berkeley students. The ideas that the students came up with in Fall 2003 included a challenge game called "DARE", a real time hiking guide called RFL, a mobile image

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0%

Can't get enough of Wikis

60%

Only the Wikipedia

40%

Wiki is a waste of time

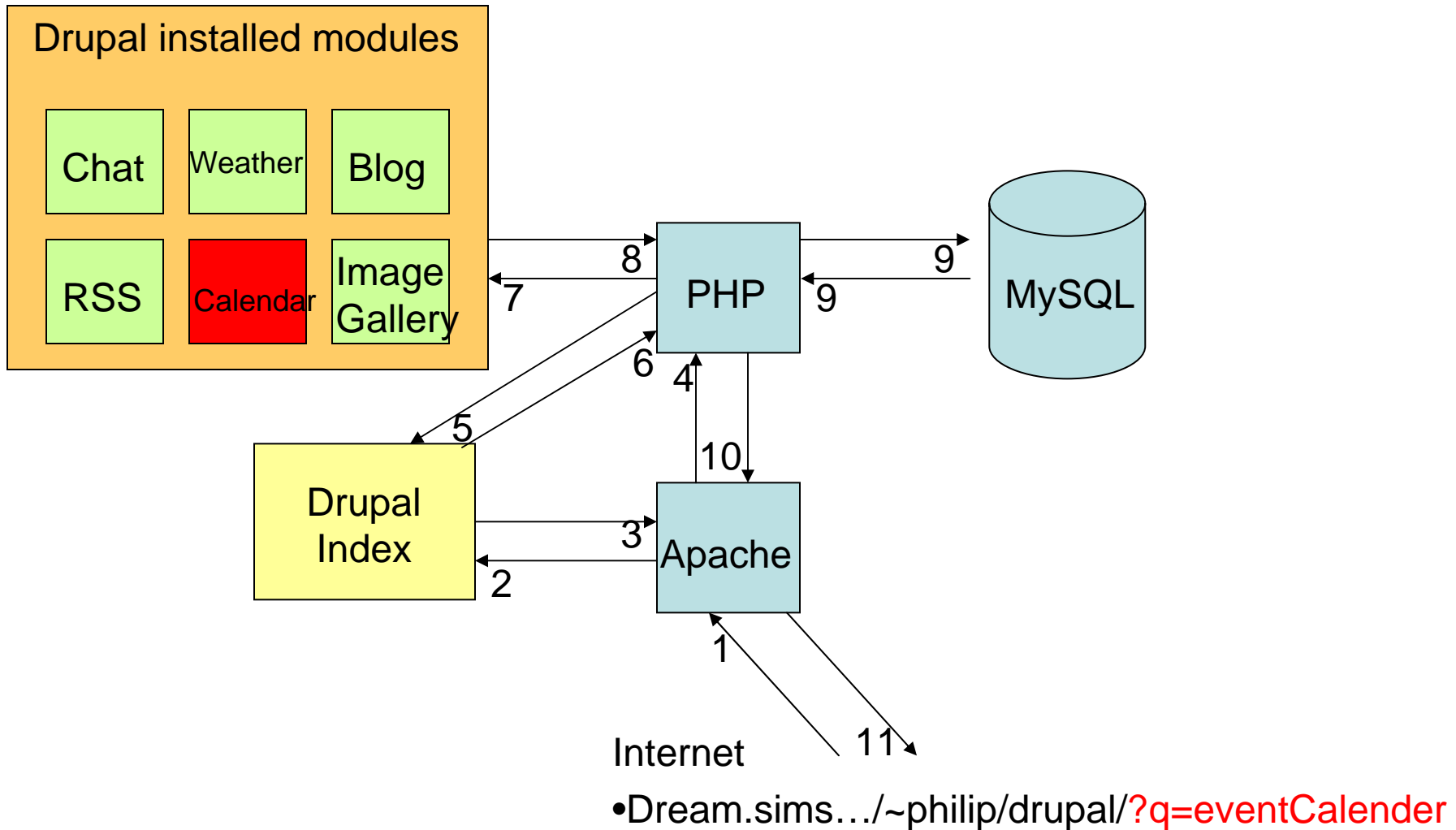
no

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



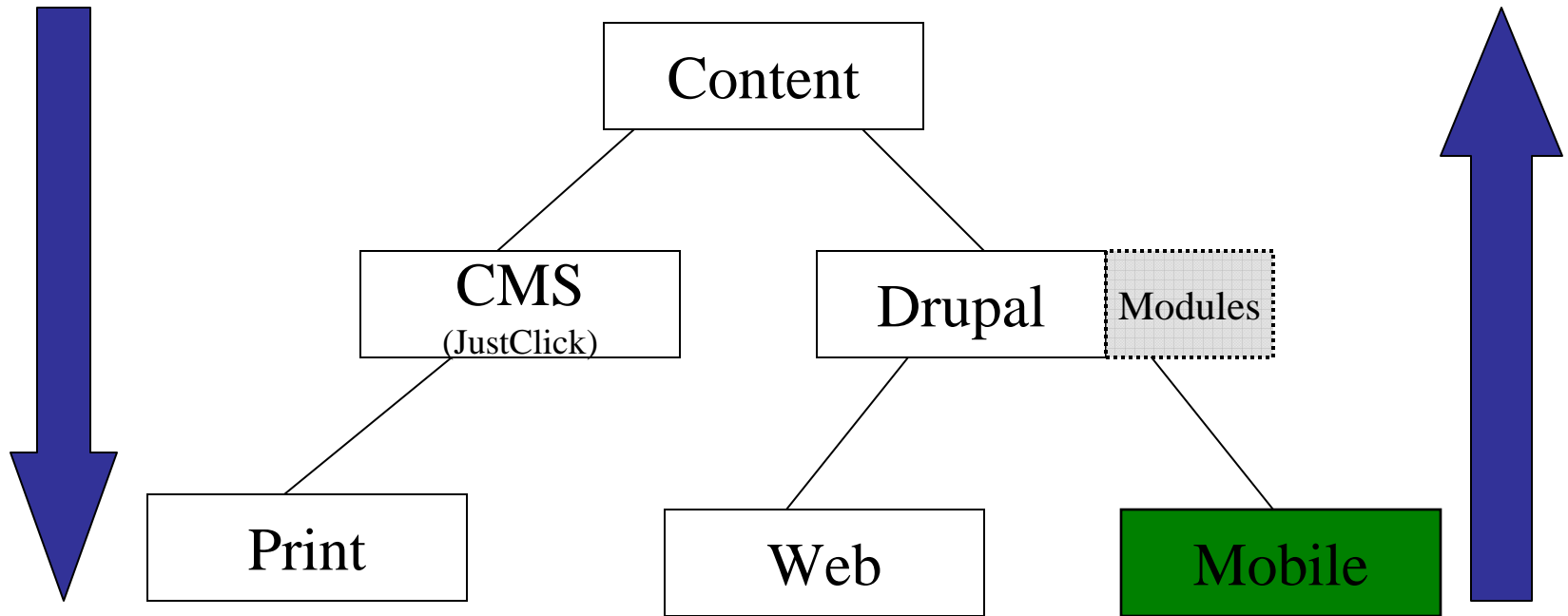


Mobile Media Tools




a course provided by the joint efforts of :



Media Convergence Framework



Mobile Media Tools: Send SMS



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User login

Username:

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Home

Cool tools at your fingertip!

Send text messages to any U.S. cell phone

Mobile Number:
 ex. 8585555555

Sender:
 Name or Phone Number

Service Provider:

Your Message:

Characters Remaining:

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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)

(c)2004 CDTM/SIMS

powered by Drupal



Local Weather

Current weather for



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 Zuendt