Tutorial: Instrumented Environments

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Organizational Issues

- Groups of 5 participants
- 2 tutorial classes:
  - Class 1: Friday, 09:30 p.m. s.t. – 11:00 p.m.
  - Class 2: Monday, 10:00 p.m. c.t. – 12:00 p.m.
- Criteria for achieving the certificate:
  - Producing software for instrumented environments
  - Solutions must be fully functional
  - User study – when the code is not extensive
    - User study needs to be substantial (e.g. ANOVA)
    - Will be discussed in the next tutorial

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Organizational Issues (contd.)

- Lecturer of all tutorials:
  - Sebastian Boring, sebastian.boring@ifi.lmu.de
    +49-89-2180-4684, Room 203
- Things to keep in mind:
  - About the groups:
    - "Non-functioning" groups have to either make it work or (as last possible option) talk to the lecturer
    - Grades for the final solution are group-grades, e.g. every member gets the same final grade
  - Milestones:
    - Submission as ***.zip** file through *UniWorx*
    - The deadline is **always**: **Friday, 09:29 a.m.** and **Monday, 9:59 a.m.** respectively

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Projects

- All projects need to include (at least) one of the following devices:
  - Mobile Phone (WiFi and/or Bluetooth enabled)
  - Interactive Table (Basement or Room A 101)
  - Public Display (Basement or Hallway in 1st Floor)
  - Steerable Projector (Basement)
  - PTZ Cameras (Basement)
  - iPod Touch
  - Surround Sound System (Basement)
- Big presentation at the end of the course:
  - Present your **running** code
  - Date: **January 20th, 2009**

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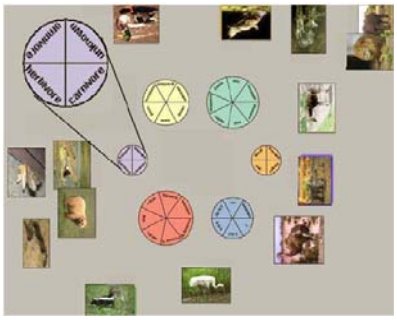
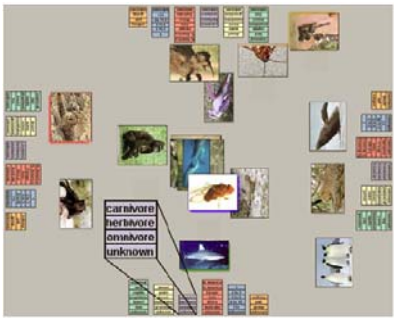
Some Examples

- Collaborative Group Photo Tagging:





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Some Examples (contd.)

- Collaborative Group Photo Tagging:
  - Since the photo collection of each person in this group shares the common context (for example, same location and event, photo shooting in close time period, etc.).
  - The main work of this project is to integrate content analysis (face recognition, quality recommendation, etc.) and context analysis (event detection, tag recommendation, etc.) into a collaborative group tagging system.
  - Different from TeamTag, which conducted the study based on given tag categories and common knowledge photo collections, our project focuses on supporting tagging in an intuitive way and generating tag recommendations in a collaborative way, which means u gets tag recommendation from other's tagged photos.
  - Co-supervised with Yaxi Chen

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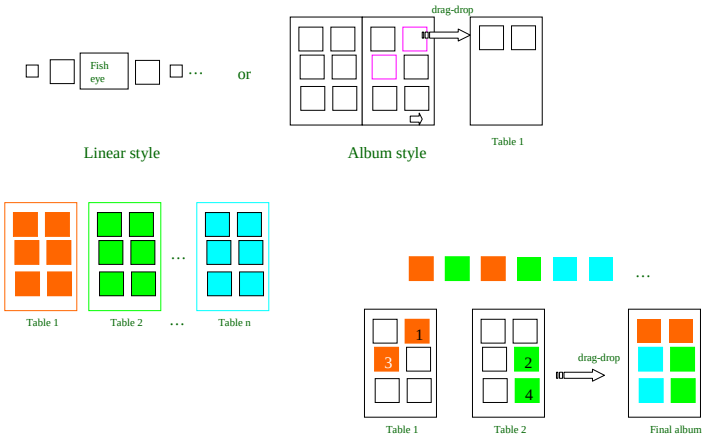
Some Examples (contd.)

- Collaborative family / group album creation:



Some Examples (contd.)

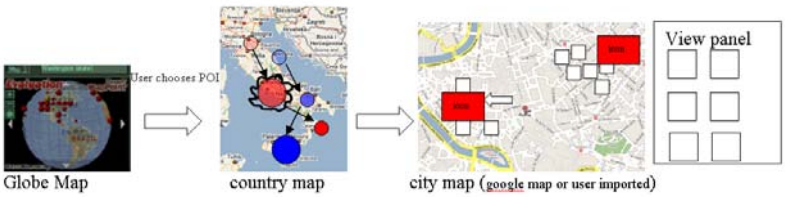
- Collaborative family / group album creation:
  - Support creating a group album based on the fundamental functionalities such as browsing, comparing, ordering and selecting, etc. Find out the effective mode for collaborative group task.
  - Find out in this scenario, which work style is more preferred, auto merge plus manual edition or recommendation plus manual edition.
  - Assisted visualization tools (timeline + photo event) which facilitate photo selection.
  - Co-supervised with Yaxi Chen

Further Projects

- Haptic feedback for the interactive table:
  - Place a bass-box into the table (Room A 101)
  - Generate sound (low frequency) resulting in movement of the table‘s surface
  - Provide example software to test the feedback
- Extension of Shoot & Copy:
  - Several images displayed on the public display
  - Capture a (sub-)portion of the screen
  - Gain control over the captured item
- New interactive table:
  - Create a new interactive table
  - Free choice of input technology
  - Write a library to send inputs to third-party software

Further Projects (contd.)

- Travelogue / Travel Diary:
  - User-driven:
    - system assists user with organization and browsing.
    - No public platform nor GPS device is needed.
    - User defines location.
    - Representative photos for clusters.
  - Co-supervised with Yaxi Chen



Further Projects (contd.)

- Collaborative Music Recommendation:
  - Users carry MP3s on their cell phones
  - They can connect to a public display:
    - Music files are displayed on the public screen
    - Similarities are shown between them (based on tags)
    - Display can be interactive (e.g. table)
  - By selecting a song from another user, the MP3 gets streamed on the user's device for sample listening
  - Also focus on the visualization
  - Co-supervised with Yaxi Chen

Further Projects (contd.)

- Content Displaying Recommendation:
  - Users carry a variety of files on their cell phones
  - Sometimes, viewing content on the phone not suitabe (e.g. textual documents such as a PDF)
  - Support users in finding nearby displays that are:
    - Available for (partly) displaying
    - Give the required input (otherwise the controls could reside on the phone)
    - Let the user chose where to display the content
  - Also focus on the visualization

Further Projects (contd.)

- Finding an Additional Device:
  - Users move daily in multi-display environments
  - Support for detecting (and recommending) devices needed:
    - Displays (Audio and Video)
    - Input devices (e.g. a keyboard)
  - Focus on the visualizations for devices on the phone
  - Also focus on the interaction on the phone in order to set the parameters and then select the display
  - Some displays are currently in use, but might be available soon afterwards
  - All displays are stationary and hence have a predefined location → scenario = „instrumented building“

Group Allocation

- Group A:
  - Sotzek, Tuchina, Kunz, Vodicka, Huff
- Group B:
  - Hausmann, Frauendienst, Scherr, Schulz, Winter
- Group C:
  - Maier, Berchtold, Dorfmeister, Kammler, Kummler
- Group D:
  - Müller, Bafadikanya, Lodde, Kiemer, Gottschling, Pleines
- Group E:
  - Lauber, Creutzenberg, Raltchev, Gebhardt, Wenqi

Group Allocation

- Group G:
  - Busch, Schreier, Steinmayr, Grammer, Ostermeier
- Group H:
  - Nitsch, Neugebauer, Bauer, Joswig, Köck
- Group I:
  - Schenk, Kowalski, Hommer, Metzner
- Group J:
  - Weidenhiller, Kammerer, Bauer, Rodestock, Obexer
- Group K:
  - Belzner, Meindl, Kaiser, Hampp, Gargitter
- Group L:
  - Spanner, Mönnig, Lindner, Fernandez

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Tasks till next week

- Hand in a presentation for your project:
  - Scenario description
  - Milestones and schedule of your work
  - Work packages (+ Assignment to group members)
  - Some sketches (e.g. Photoshop) of the proposed system
- Next tutorial:
  - Friday, October 31st, 2008 and Monday, November 3rd, 2008:
  - Presentation of the scenarios and discussion

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