
HCI Education at CTU Prague

Pavel Slavik



Computer Graphics Group



Prague



CTU Prague



HCI group at CTU

- 1 Professor
- 2 Assistant Professors
- 5 PhD students
- Several MSc students participating in various projects



Outline

- History of HCI education at CTU
- Structure of courses
- Cooperation with industry in the field of HCI education
- HCI educational activities outside university



History of HCI education at CTU

- 1985 course Dialogue System at special study track for industrial training
- 1995 course Design and Implementation of User Interfaces in standard MSc curriculum
- At the same time special course Human-Machine Communication was included in curriculum



Current state of HCI education

- 2008 new course Testing of User Interfaces was included in BSc curriculum
- 2008 - 2009 new course Mobile Computing will deal mostly with the design of UI for mobile applications (BSc curriculum)
- Besides these activities the HCI issues have been included in other courses – especially web oriented ones
- In MSc (2009 -2010) courses Construction of User Interfaces + Special User Interfaces



Framework of HCI education

- Design and Implementation of UI
- Structure: lecture + projects
- The stress has been put on practical aspects of HCI => cooperation with companies in the field
- IBM, Sun Microsystems, Rockwell Automation, ComApp,.....
- Another source of projects: EC projects (3 FP6, 2 FP7)

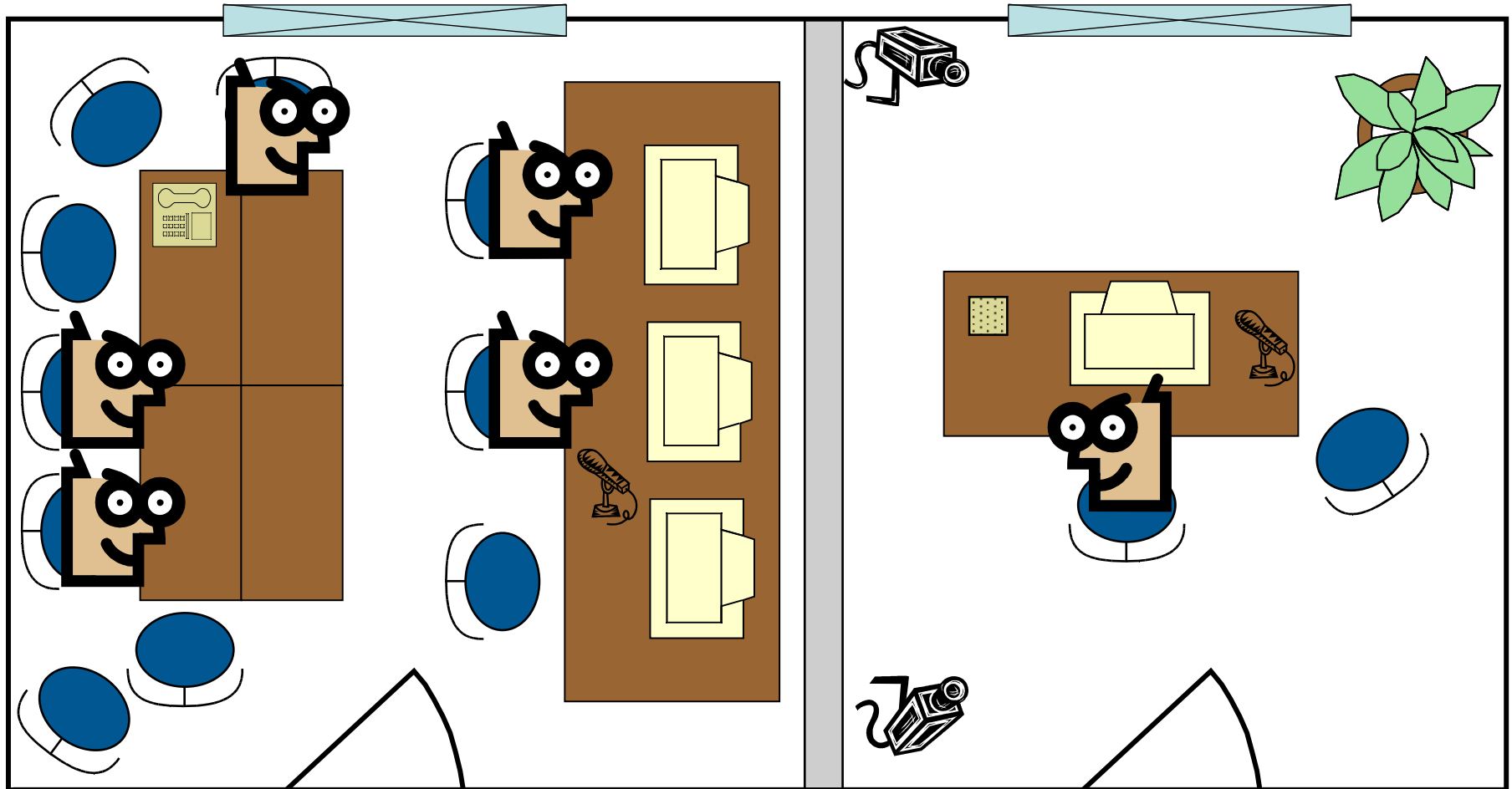


Usability issues

- The main partner: Sun Microsystems
- Joint Usability lab (the first one in the Czech Republic) established in 2004
- The lab is used both for research and education
- Students perform usability tests of UIs (either designed by themselves or ready made UIs developed by various companies)



Usability lab



Usability Lab - equipment



Other HCI issues taught

- Formal models of UI
 - Seeheim, MVC,...
 - STN, grammars,...
 - HTA, CTT,.....
- Cheap usability testing (heuristic evaluation, ...)
- Psychological issues + perceptual issues,...



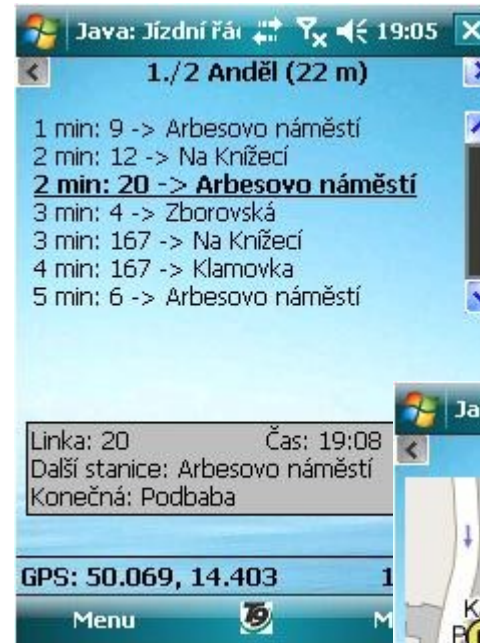
Projects as a part of education

- Form of project activity: student competition
- The largest amount of projects: IBM Research (voice based interfaces + other issues)
- Typically number of projects: 15-20, number of students: 35-40. Extreme last year: 120 students
- First price – on average 1000 Euros

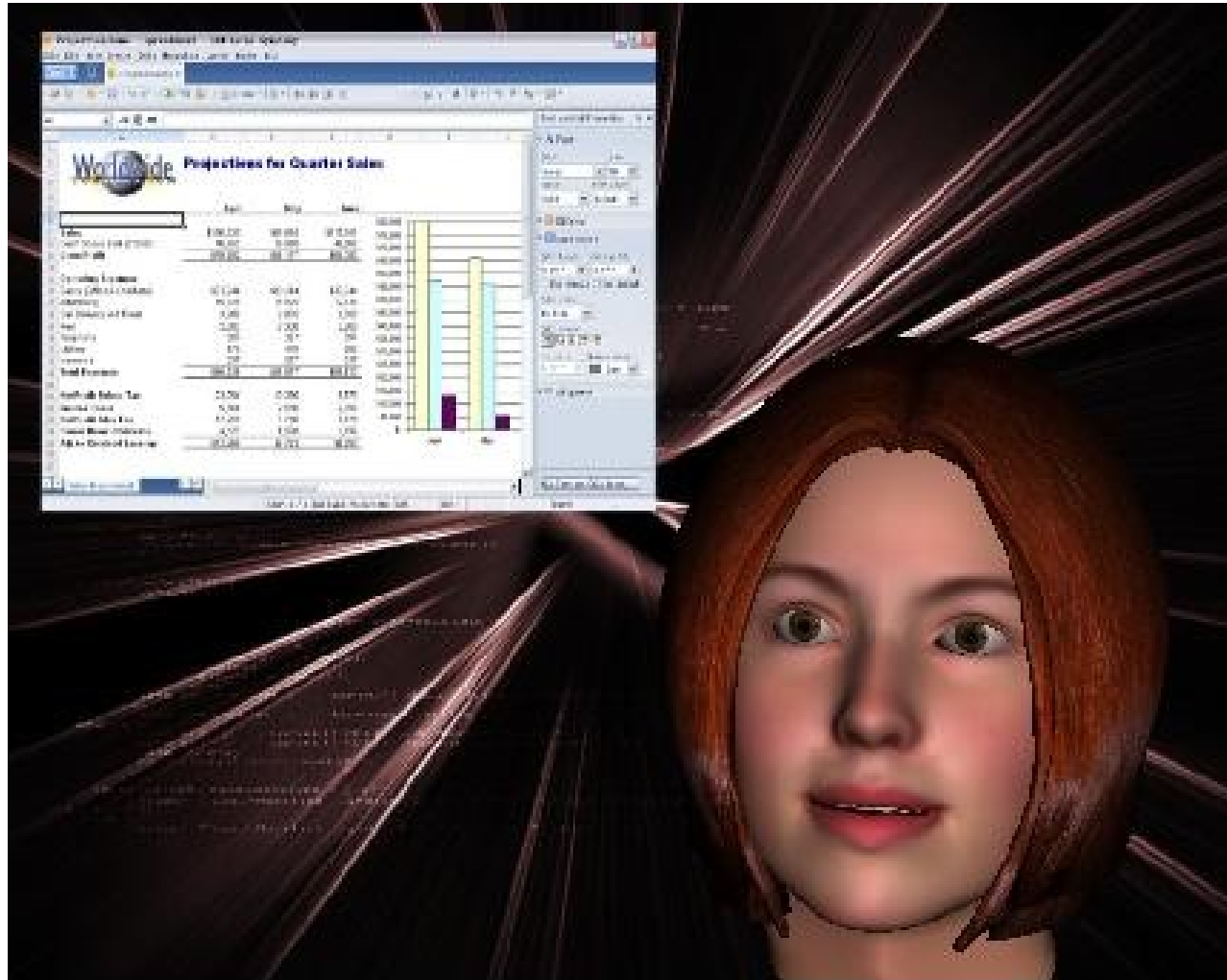


Navigation in public transport in Prague

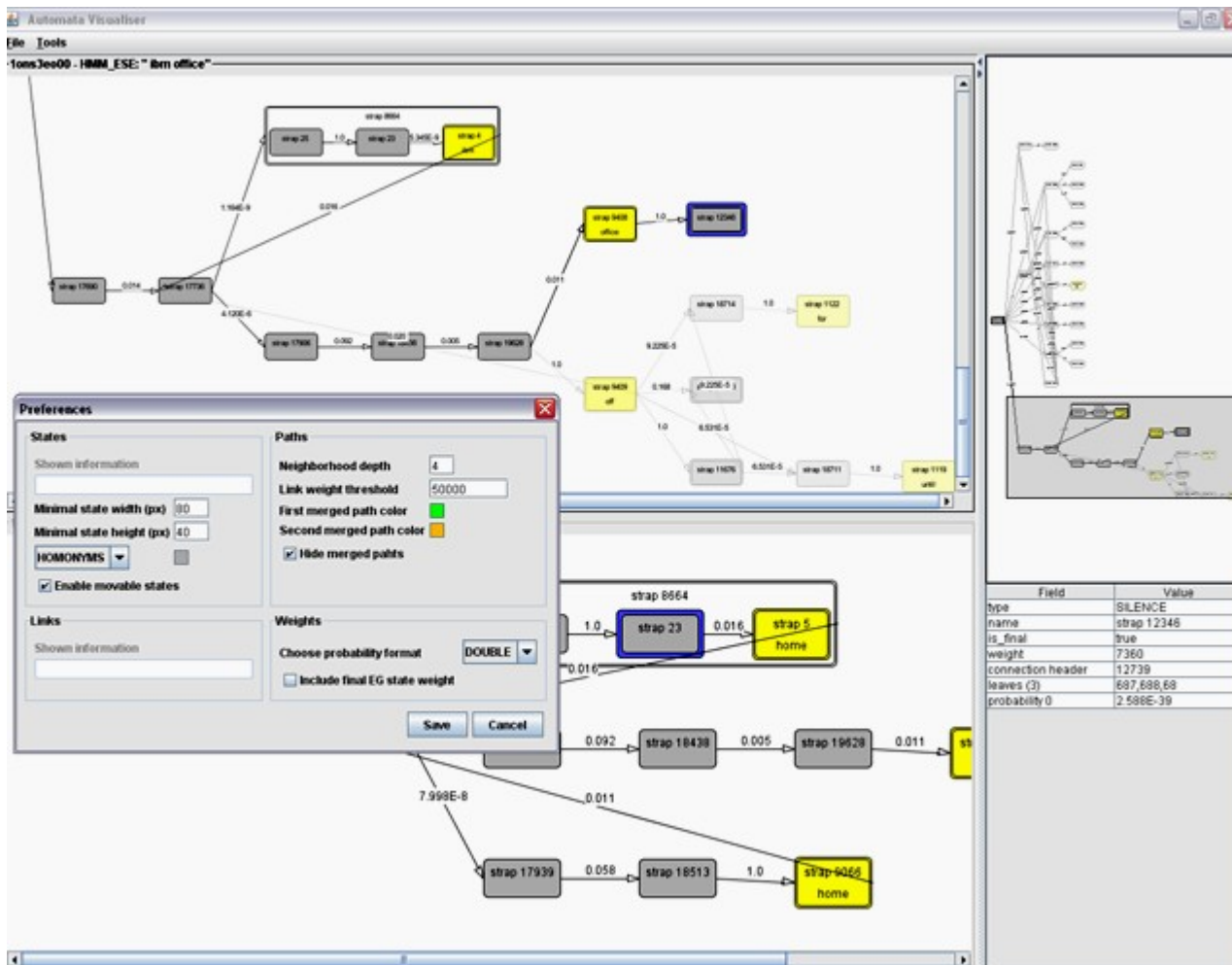
- Downloading timetables of public transportation for nearest stations on PDA
- User's location will be determined by GPS
- User can also display a map
- Request sending a specially formatted SMS to obtain an electronic ticket



Talking head at reception



Visualization of stochastic automata



GPS Car Computer

- Client/server application for gathering of GPS data and their annotations
- Collected data from agents can be shown at CarComp Trip Evidence web interface (<http://carcomp.felk.cvut.cz>)



Car Simulator for voice based UI usability testing



Landscape generator + physical simulation



Sun Project: A11Y plugin

- Develop better tools for evaluation of A11Y rules in Java application.
- Integrated into NetBeans IDE
 - real-time suggestions for the GUI developers
- Focus on rules that work with Label For parameter, Tooltip parameter Mnemonics parameter

A11Y Result Window - NewJFrame3

Errors: 1 Warnings: 1 Information: 1 **Sorting order icon** Automatic i18n

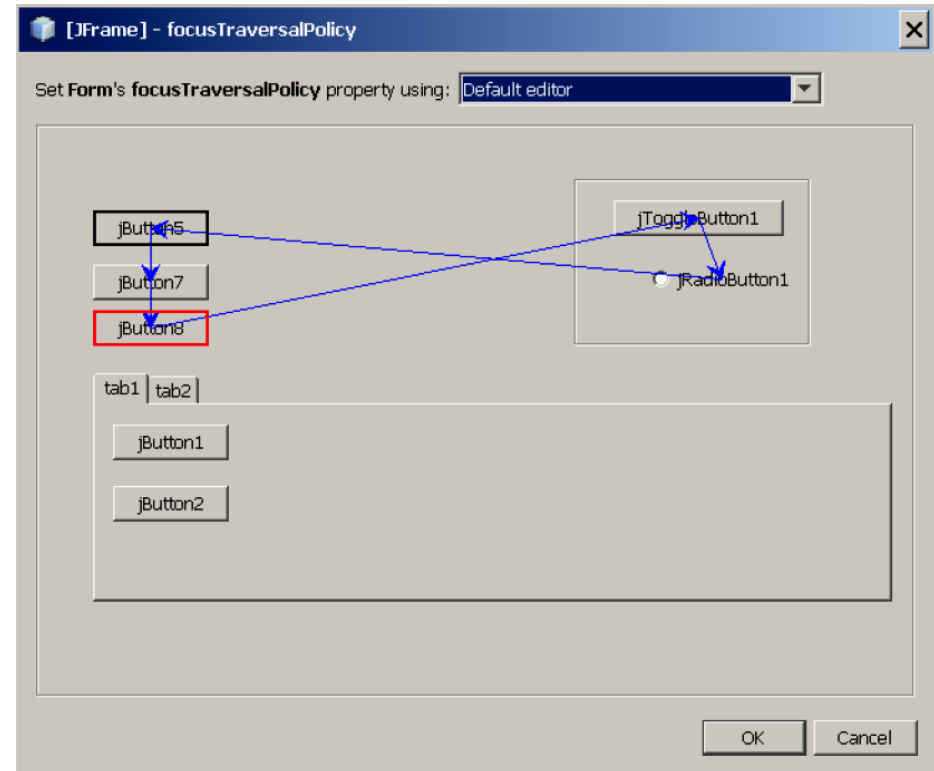
Type	Rule	Recommendation / Description	Component
	Name	Accessible Name was copied from text property	jButton1
	Mnemonic	Mnemonic 'x' is not present in component's text property	jButton1
	Description	Provide Accessible Description property value	jButton1

Message type icons



Sun Project – A11Y plugin (cnt.)

- Visual Design of tab traversal
 - focusTraversalPolicy class
- Integrated into NetBeans IDE to visually design focusTraversalPolicy class for the container
- Automatically generates the code for the container



Educational activities outside CTU

- HCI training courses for companies in cooperation with special training company TrainTime
- Two courses have been offered:
 - UI testing
 - UI design



ACM SIGCHI local chapter activities

- Organization of specialized talks (cca 6 week period)
- Talks are given by both local experts and experts from abroad
- Participation: 40-180 people
- Topics: psychology, usability, tools for UI design ..
- www.sigchi.cz



SIGCHI - WUD

- **WUD – World Usability Day (November)**
- **Part for general public + part consisting of seminars**
- **Up to now: 3 times**
- **Participation: from 80 to over 200 people**
- **Talks given by Czech experts and experts from abroad**



Thank you for your attention



Computer Graphics Group

