
PDA

Main design problems – cont.



Main design problems of mobile UI

1. Usage of the screen space

- 1a. Small screen space
- 1b. Flexible user interfaces

2. User interaction

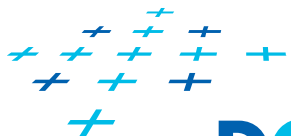
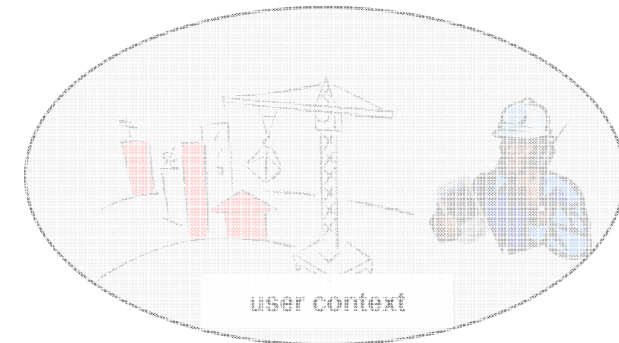
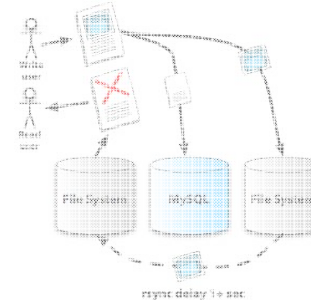
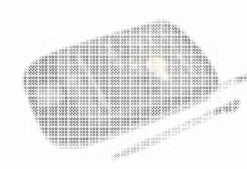
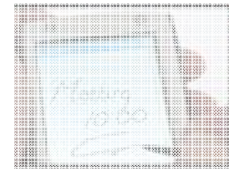
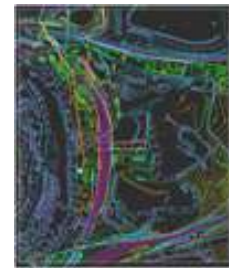
- 2a. Handling the user input
- 2b. Direct pointing (stylus/hand)

3. Design generally

- 3a. Guidelines
- 3b. Strange behavior

4. Exploiting context

- 4a. frequent changes
- 4b. variety of parameters
- 4c. context driven UI



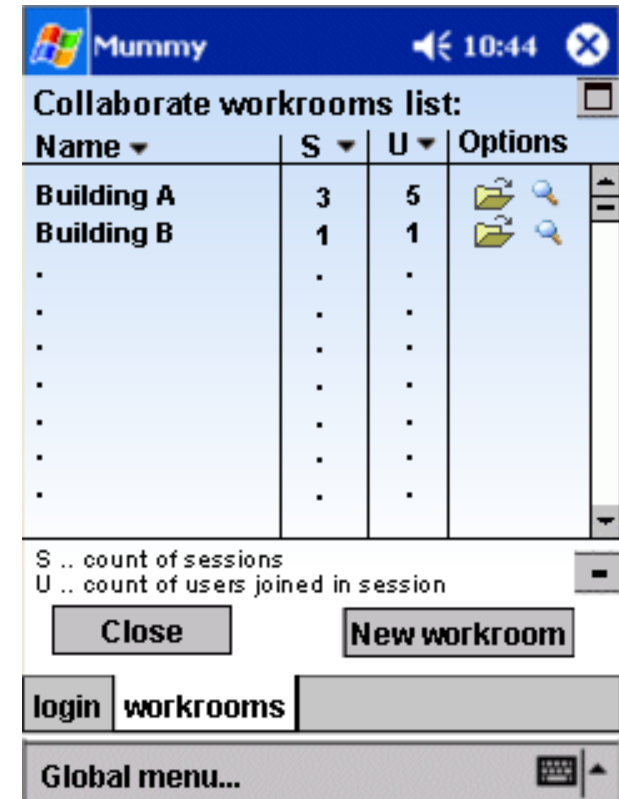
1a. Usage of the screen space – small screens

- Information grouping
 - principles
 - mechanisms
- Presenting elements in lists
- Information packing
- Scrolling mechanisms



1a. Information packing – mechanisms

- Reducing white space
 - text based
 - condensed fonts
 - text structure redesign (e.g., removing line breaks)
 - graphical based
 - layout redesign
- Reducing the content part
 - text based
 - reducing font size
 - summarization, keywords, show/hide
 - graphical based
 - zooming techniques
 - focus & context techniques
- Reducing the space occupation of UI controls
- Why do we perform packing?



1a. Information packing – use-cases

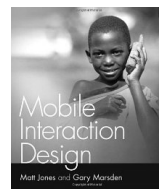
■ Information browsing (WWW portal)

The screenshot shows the Economist.com website in a Mozilla Firefox browser window. The browser's address bar displays the URL <http://www.economist.com/#main-navigation>. The page features a prominent red banner at the top with the text "Receive regular analysis of this crazy world for as little as €2 per week." and a "CLICK HERE >>" button. Below the banner is a search bar, a login section, and a subscription offer for "12 issues for €24". The main content area includes a featured article titled "The comeback cleric?" with a photo of Mahmoud Ahmadinejad and Muhammad Khatami. To the right, there is a "Most commented" list and a "Print edition" section. The bottom of the page shows an advertisement for Veolia Environnement.

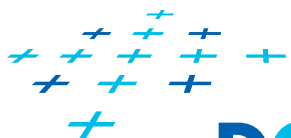


1a. Information packing – use-cases

- 1D browsing
 - horizontal scrolling removal
 - white space reduction
- 1.5D browsing
 - vertical scrolling reduction
 - inside one page vs. more pages
 - summaries
 - incremental
 - keywords
 - summary
- 2D browsing
 - graphical based approach
 - zooming
 - magnifying pop-ups
 - collapse-to-zoom
- Information visualization
 - Overview first (Shneiderman, 1996)
 - Focus + context (Card et al., 1999)
 - Fish-eye lens (Furnas, 1986)

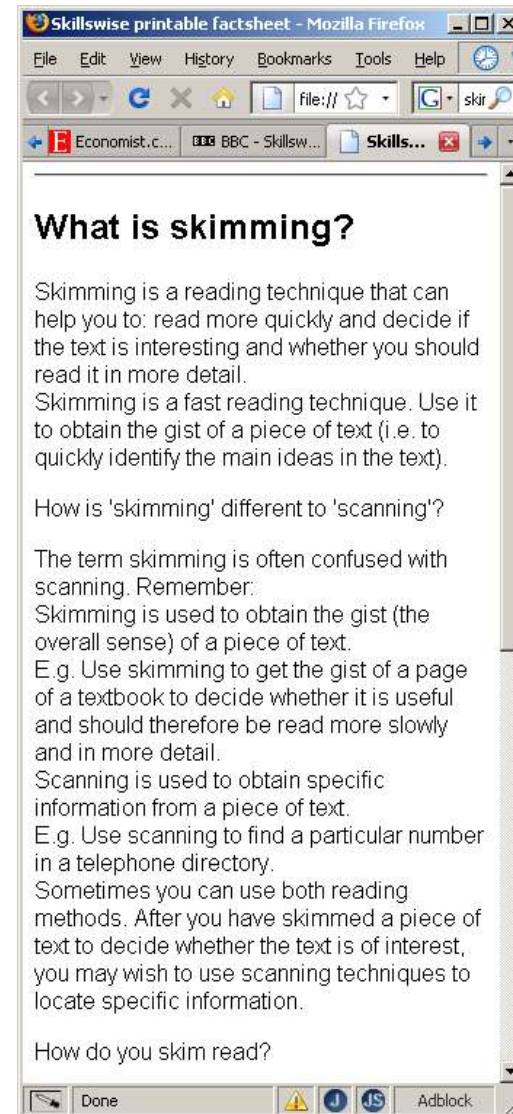


Ch 9.3.2



1a. Information packing – use-cases

- How the user actually reads?
 - skim reading
 - How to support this?
 - sections
 - keywords



1a. Information packing – use-cases

Je to bílý ovladač s poutkem na zápěstí, který monitoruje pohyb ve všech směrech, včetně rotace. Navíc má na sobě tlačítka směrového kříže a ještě nějaká další a nejlépe poslouží při hraní her. Že jsem právě popsal ovladač k herní konzoli Nintendo Wii? Ano, ale zároveň také **nový** ovladač Asus Eee Stick.



Nové ovladače Asus Eee Stick ▪ ovladač konzole Nintendo Wii

Všemi směry

Asus Eee Stick je nové příslušenství určené pro počítače Asus Eee a Asus Eee **Box**. Ovladač převádí fyzické pohyby rukou na adekvátní pohyby na obrazovce **počítače**. Uplatnění najde především u zábavných funkcí a her, ale hodit se samozřejmě může jako dálkový ovladač.

Asus nabízí rovnou dvě verze svého nového ovladače – jednu s joystickem, druhou s tlačítky. Oba s počítačem fungují prostřednictvím USB vysílače fungujícím na frekvenci 2,46 GHz s dosahem až 10 m. Součástí výbavy ovladačů jsou i vibrace. Napájení obstarávají dva běžné AA články, které by měly vydržet až 72 hodin aktivního provozu.

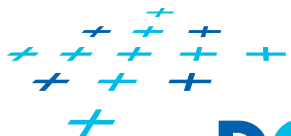
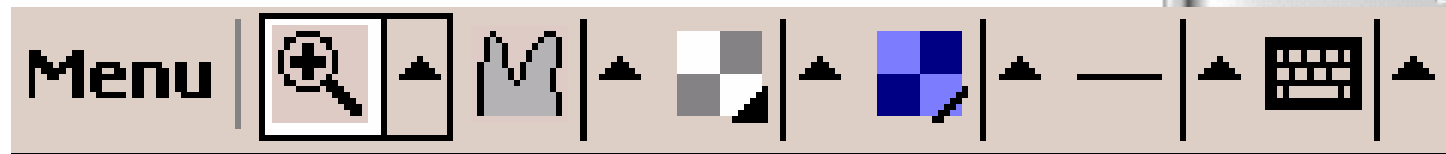
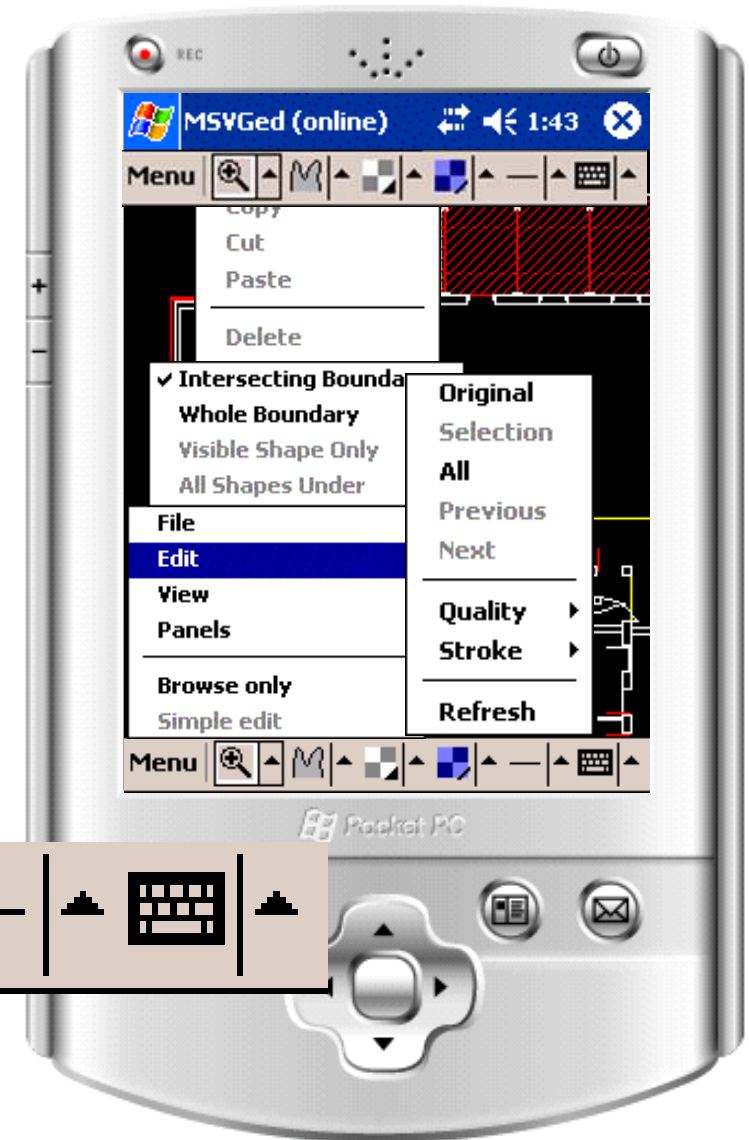
Vestavěný snímač pohybů ovladače Eee Stick nabízí **tři různé provozní režimy**:

1. 3D pohyb



1a. Information packing – use-cases

- Beyond traditional packing techniques
 - RSS
 - alternative UI controls

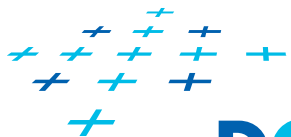


DCGI

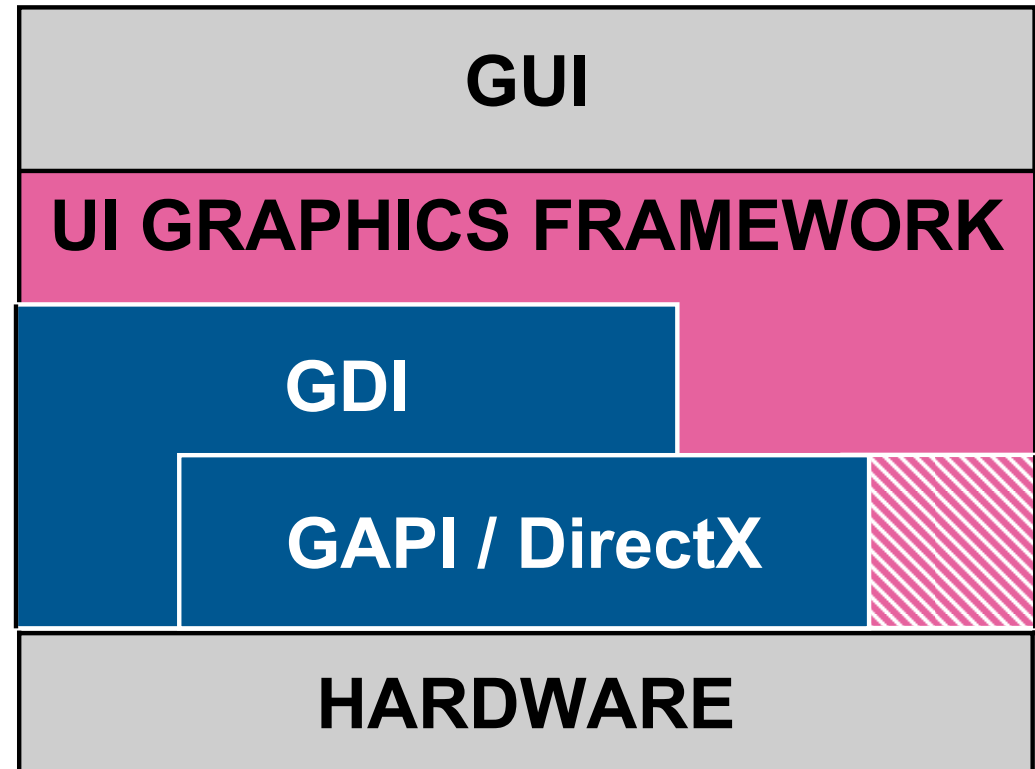
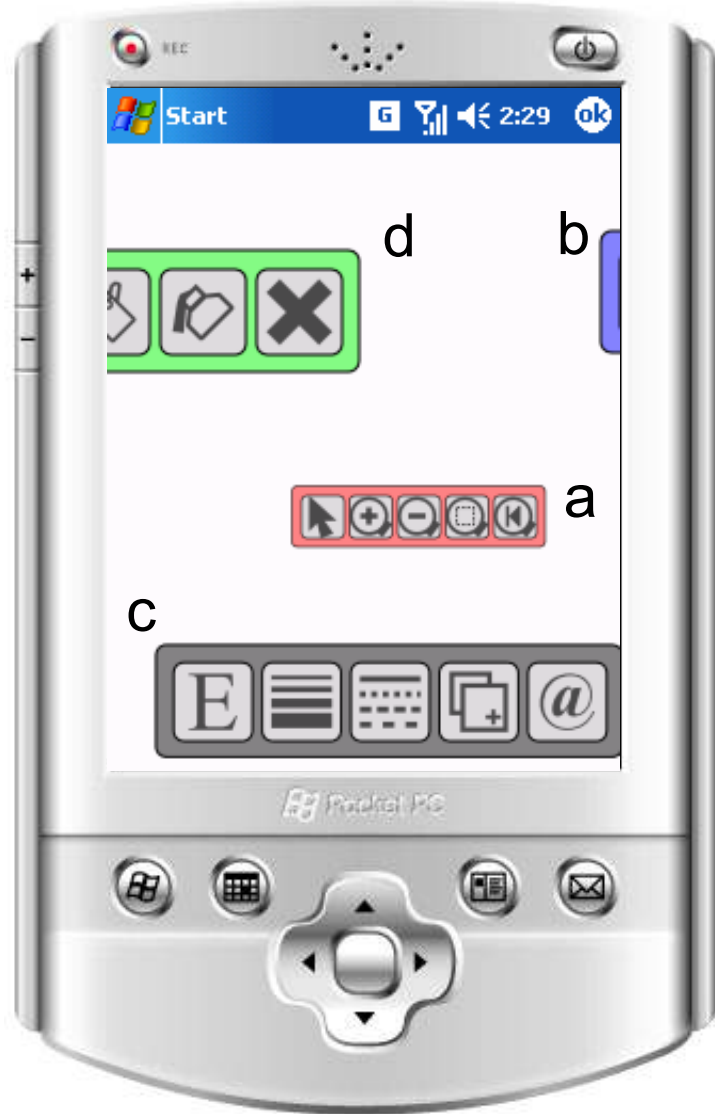


1a. Information packing – floating toolbars

- Position change
- Hide behind border
- Change the size
- Different colors



1a. Information packing – floating toolbars



1a. Presenting elements in lists, scrolling

■ What is the main problem?

- too much scrolling (vertical and horizontal)
- Solution?
 - selection
 - projection
 - sequence and size
 - more lines per item
 - more when selected

■ Select – open dilemma

- user uncertainty
- problems with scrolling
- Solutions?
 - Symbian
 - BlackBerry

■ Scrollbars vs. stylus/finger

■ Is there more lists on PDAs or PCs?

Name	S	U	Options
Building A	3	5	[Icons]
Building B	1	1	[Icons]
.	.	.	
.	.	.	
.	.	.	
.	.	.	
.	.	.	
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S .. count of sessions
U .. count of users joined in session

Close New workroom

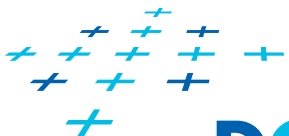
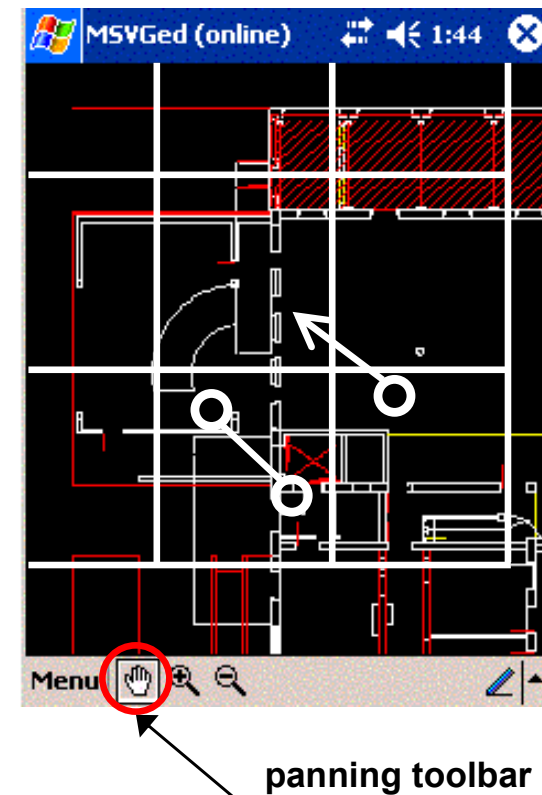
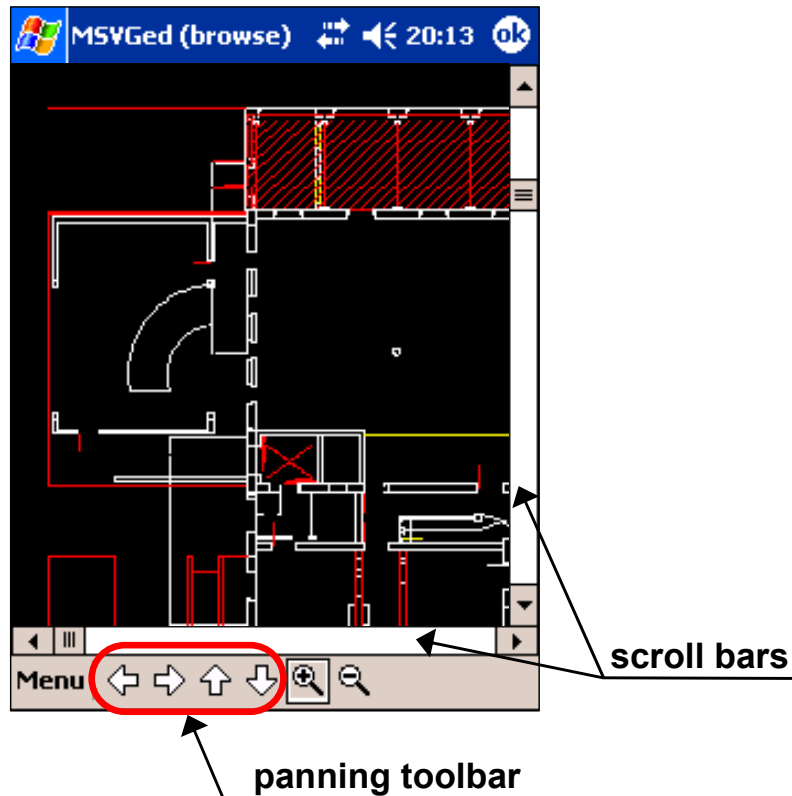
login workrooms

Global menu...



1a. Scrolling mechanisms

- Scroll bar vs. grasp hand
- Slow response -> feedback problem



Thank you for attention

