ETH

### play IT smart: serious building games for sentient architectures

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Posco E & C

08/30/2005

D**ARCH** 

Faculty of Architecture

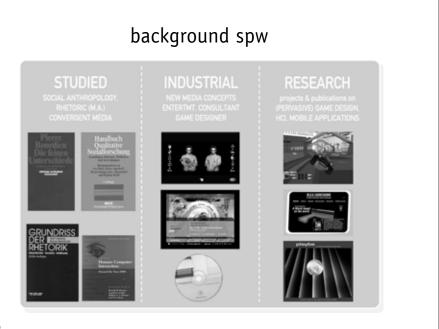
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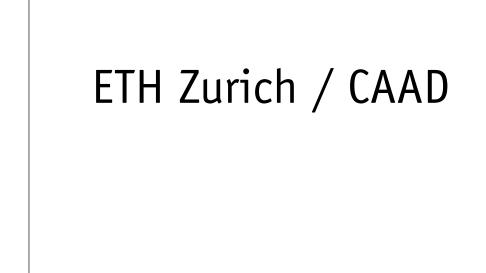
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# overview

### upcoming

- background
- about ETH Zurich / CAAD
- what are serious pervasive games in relation to architecture?
  - projects
  - discussion





at the ETH Zurich / CAAD we apply IT to create real projects:

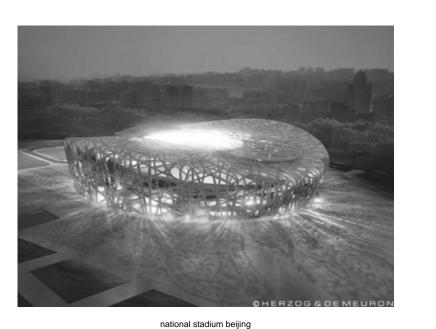
L generative design with real applications

2 one-of-a-kind production of unique building designs

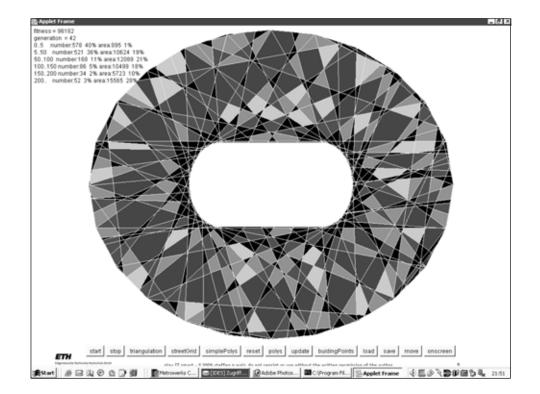
3 pervasive computing to establish (collaborative) building services

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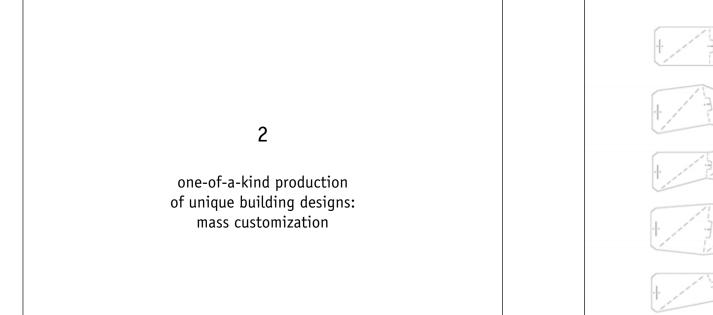
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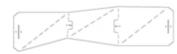




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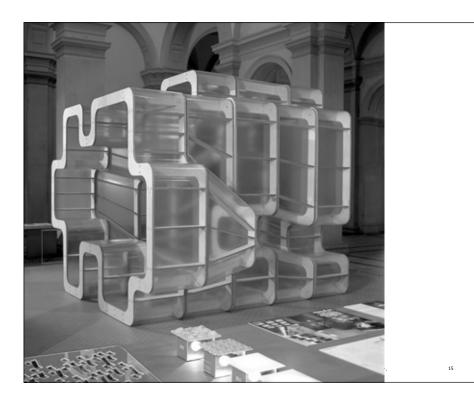
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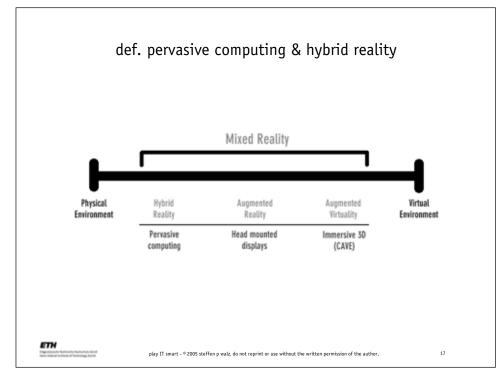


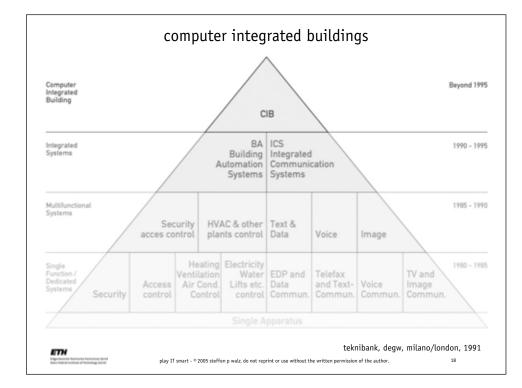
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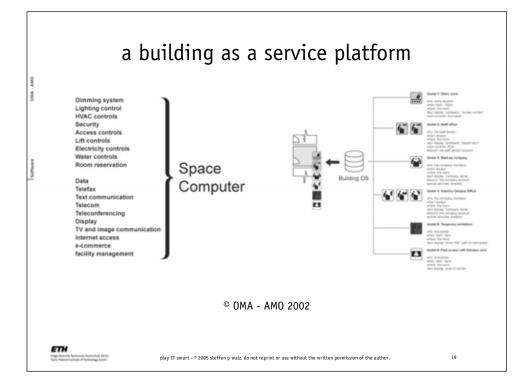




pervasive computing to establish (collaborative) building / spatial services

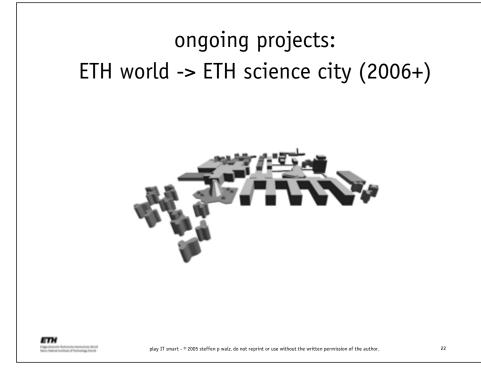












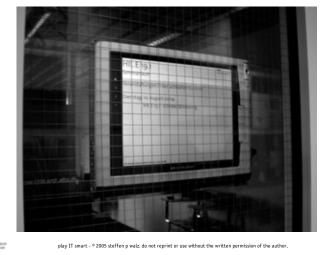
ongoing projects: ETH world / CAAD buildingIP -> ETH science city (2006+)



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# what are serious pervasive games?

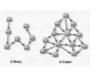
*serious pervasive games* combine =

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- 1) serious purpose (e.g. learning)
- 2) pervasive computing (e.g. mobile devices, wireless networks, sensors / actuators)
- 3) game design methods (e.g. rules & goals, spacetime, interactions, challenges & rewards, drama, closure)







### rules of play / design framework

1) the world - a place - is a gameboard

2) the game is where *you* are -> player constrains space-time

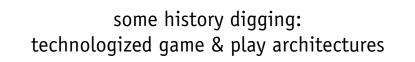
3) ideas come first, then co-texts & con-texts, then interaction schemes, media & technology

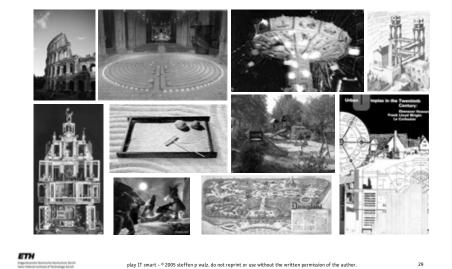
4) serious pervasive games have dialectics:

a) they empower novel subjective experiences

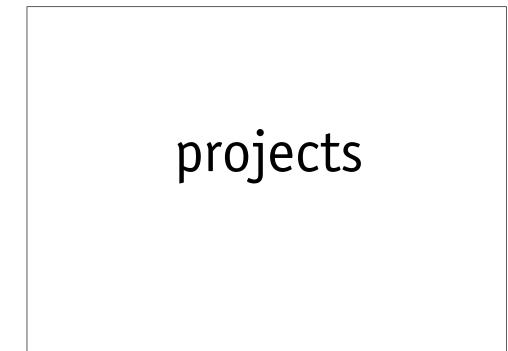
b) if well balanced, they are near perfect surveillance and motivation tools

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### not so obvious serious game technologies



- face recognition
- gait identification
- (DNA) fingerprinting
- vehicle / traffic tracking
  - electronic tagging
  - location tracking
- wiretapping / bugging
  - project echelon
- data warehouses (acxiom)
  - ID cards • CCTV

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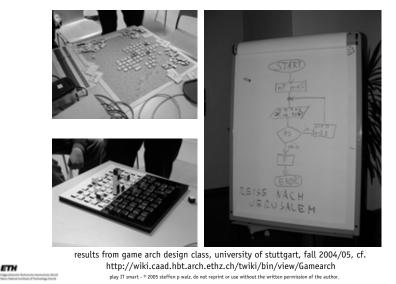
# third party serious pervasive game examples Microsoft - "I Love Bees" marketing for Halo2 (Xbox): Web + public payphones + real actors + collaborative gameplay

### MIT - "Environmental Detectives" emergency bio learning: PDA + GPS + virtual actors + collaborative gameplay ETH 33 play IT smart - © 2005 steffen p walz. do not reprint or use without the written permission of the author.

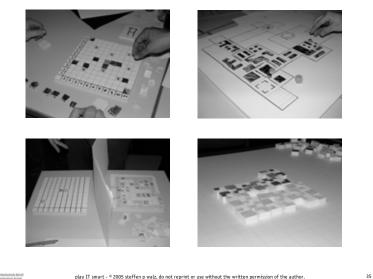
### exemplary prototyping methods III

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# exemplary prototyping methods II

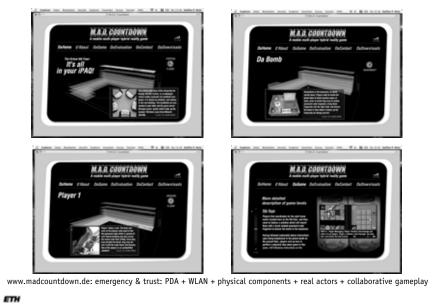


### exemplary prototyping methods I



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# serious pervasive game design: security



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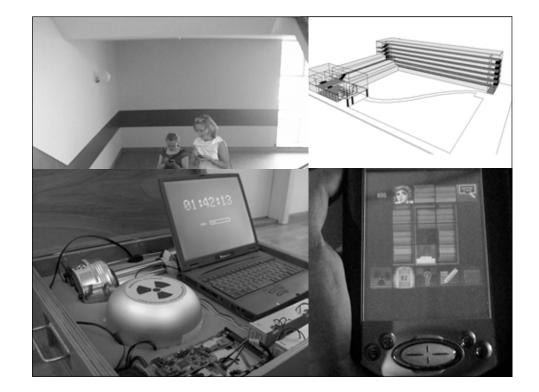
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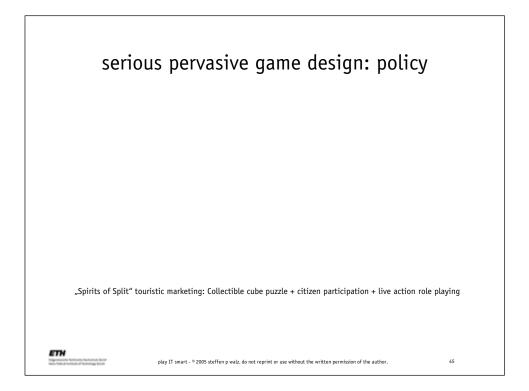




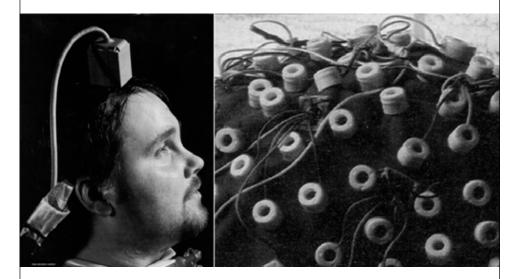


# serious pervasive game design: policy





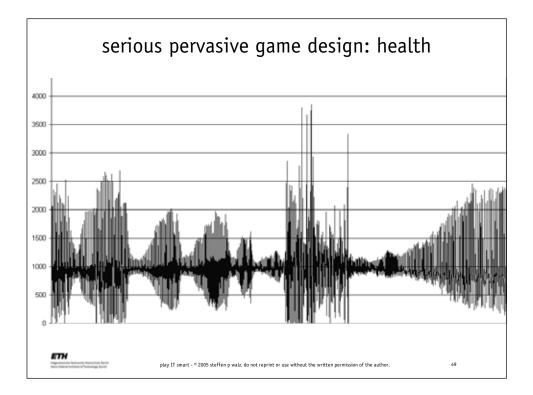
### serious pervasive game design: health

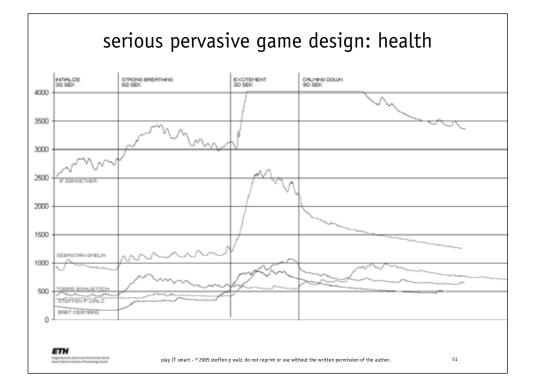


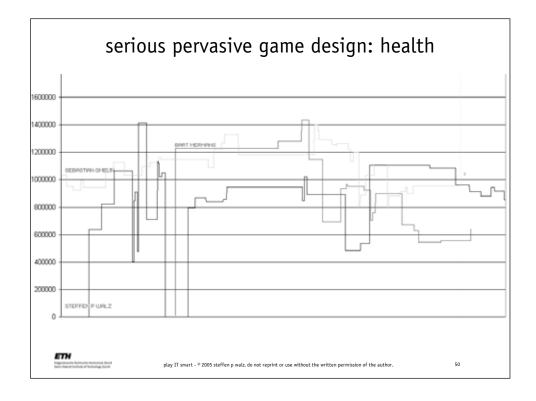


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### serious pervasive game design: health



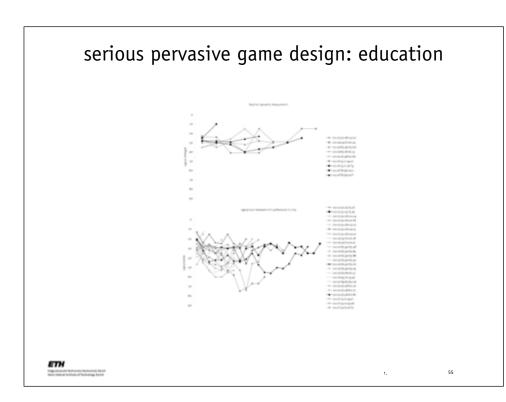
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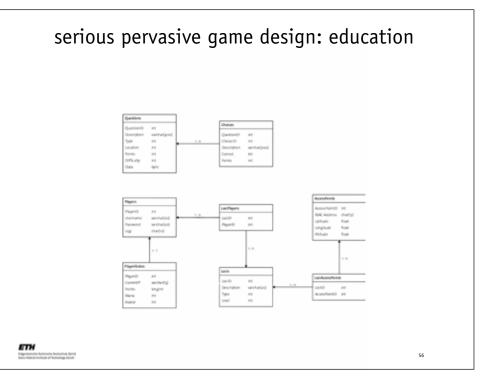
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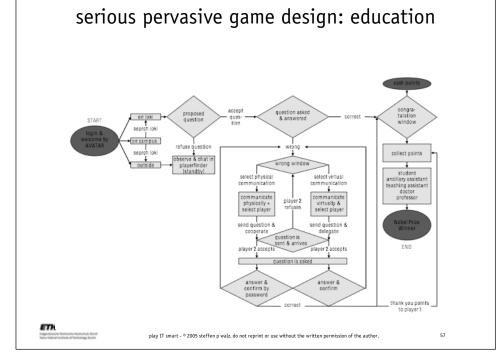


### serious pervasive game design: education



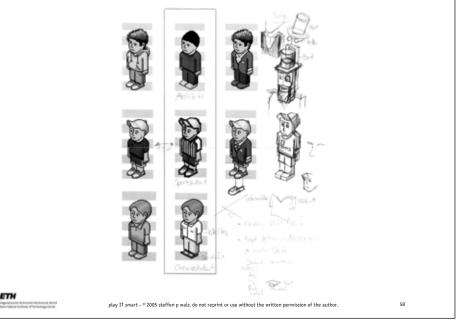






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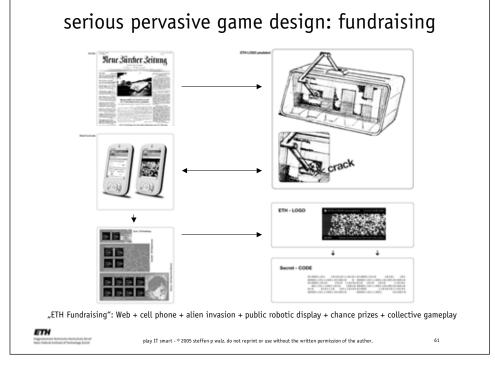
## serious pervasive game design: education



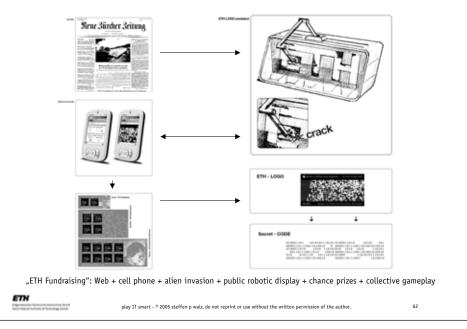
### serious pervasive game design: education



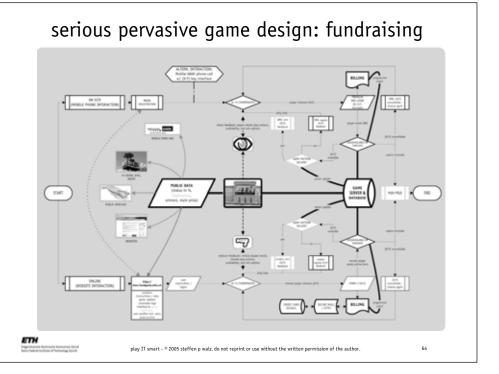
"Who's afraid of the black man?" study program learning & community building: Cell phone camera + semacode scanning + GPRS + Online multiplayer application



### serious pervasive game design: fundraising









next steps: MassivelyMultipplayerAudioRealityGames =

- many simultaneous players & quests in the style of MMORPGs, but in an audioReality
- 2) use core functionality of cell phones: telephony!
- 3) add side functionality of cell phones for interaction: universal remote control / "joystick" via phone keys

4) possibly: location based data

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next steps: MassivelyMultipplayerAudioRealityGames DER FABELHAFTE CYBERSPASS GARTEN # 1 SALUEZ. SONNENTERRASSE BALKON  $^{\circ}$ | 분 **방**화 PARTY-Keller BIBLIOTH GÄSTEZIMMER HEIZUNGS Keller SALON Bodentrepp VORRATS-Raum PARTY-Keller KÜCHE ONSTUDIO DIFLE R ŝ æ OLD PROJECT BY BBTEL, HAMBURG

