

building gameboards: game design for computer integrated environments

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09/02/2005

DARCH
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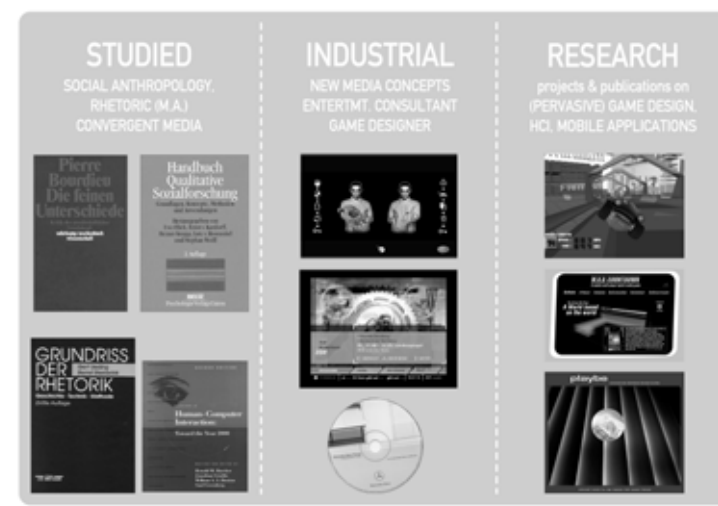
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overview

upcoming

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

background spw



ETH Zurich / CAAD

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

1
generative design
with real applications

2
one-of-a-kind production
of unique building designs:
mass customization

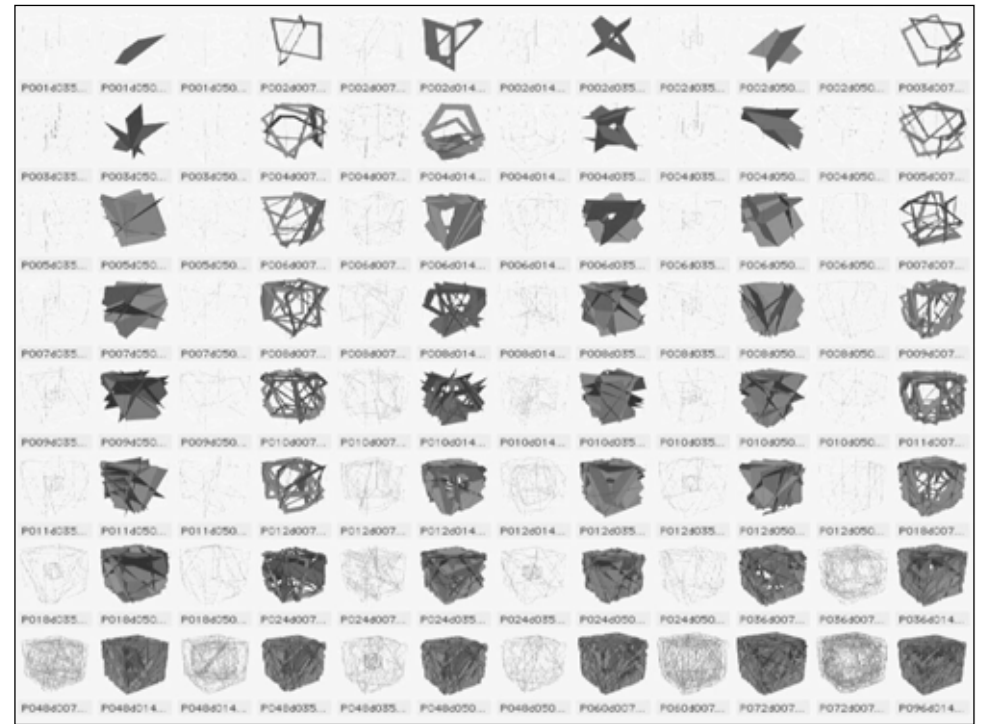
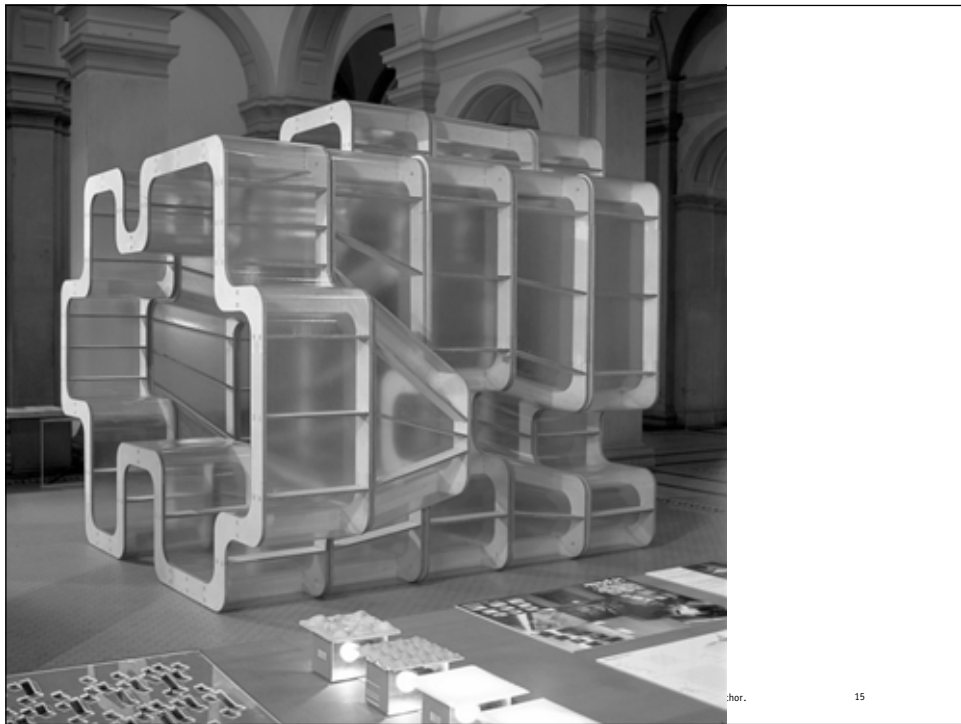
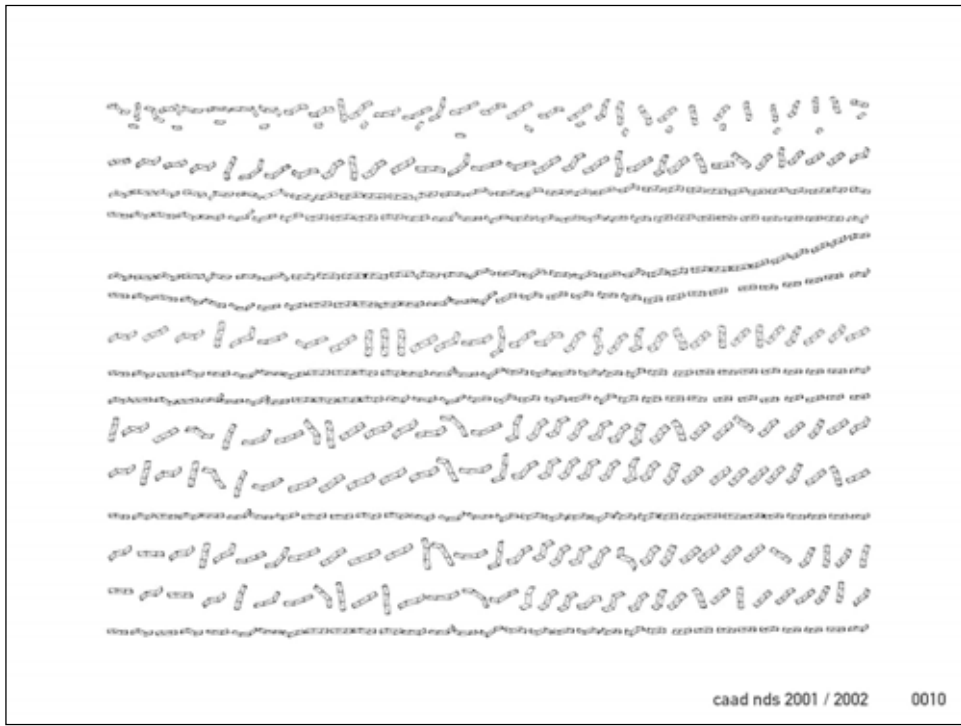
3
pervasive computing to establish
(collaborative) building services

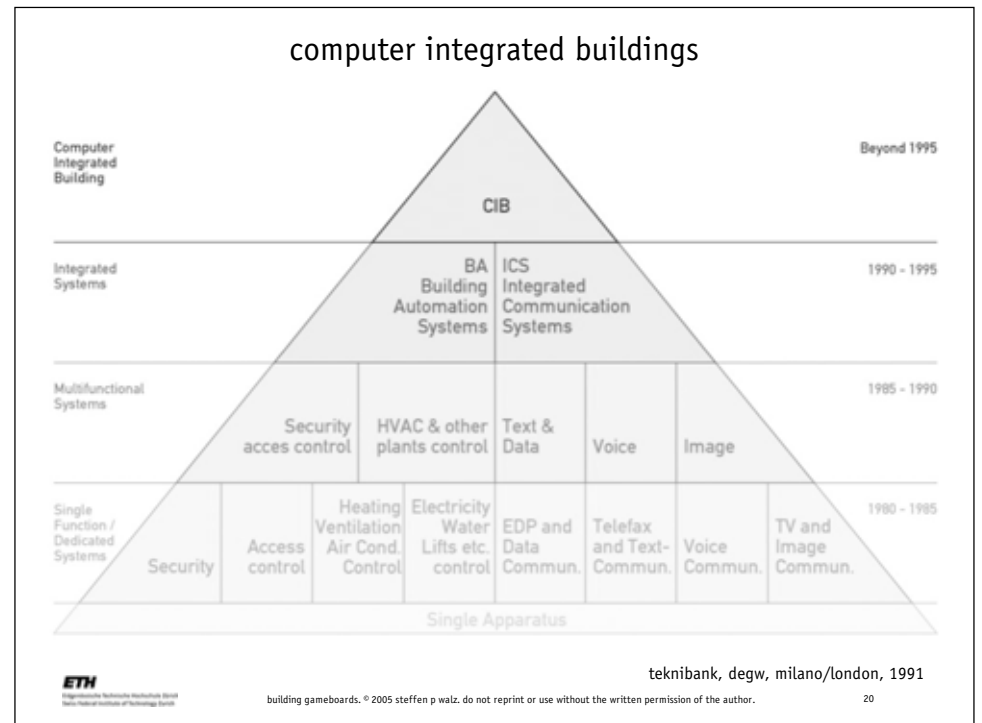
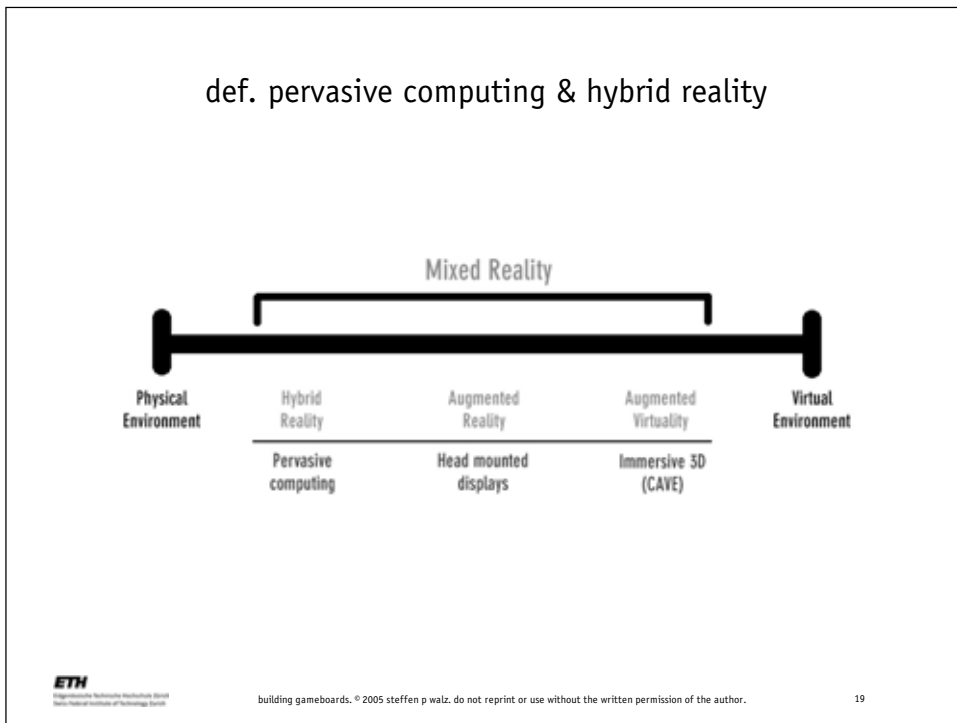
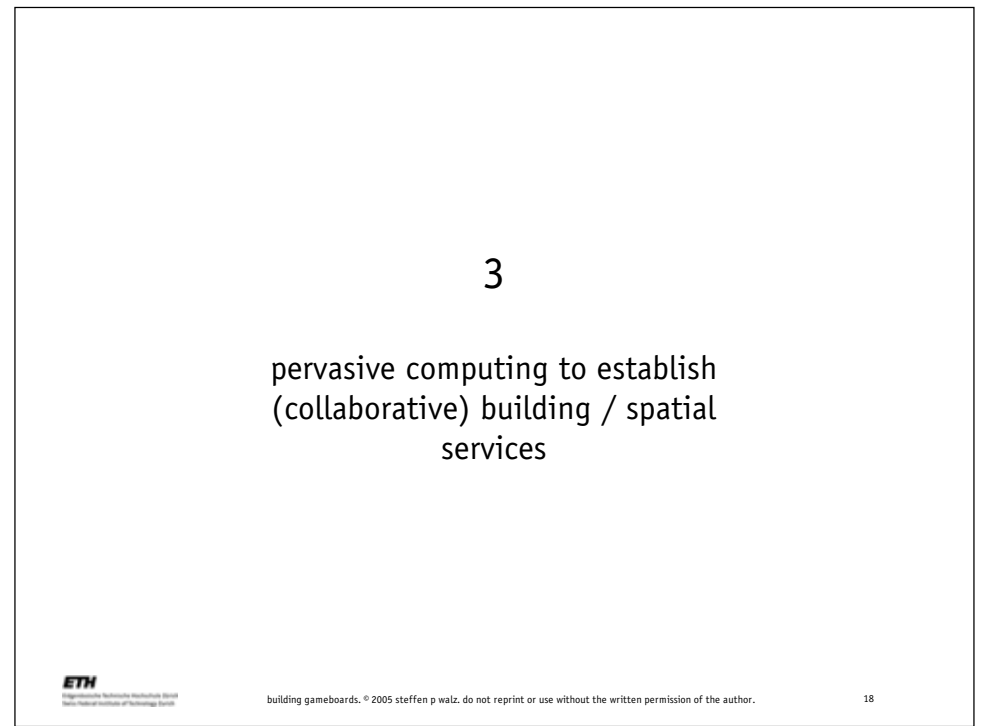
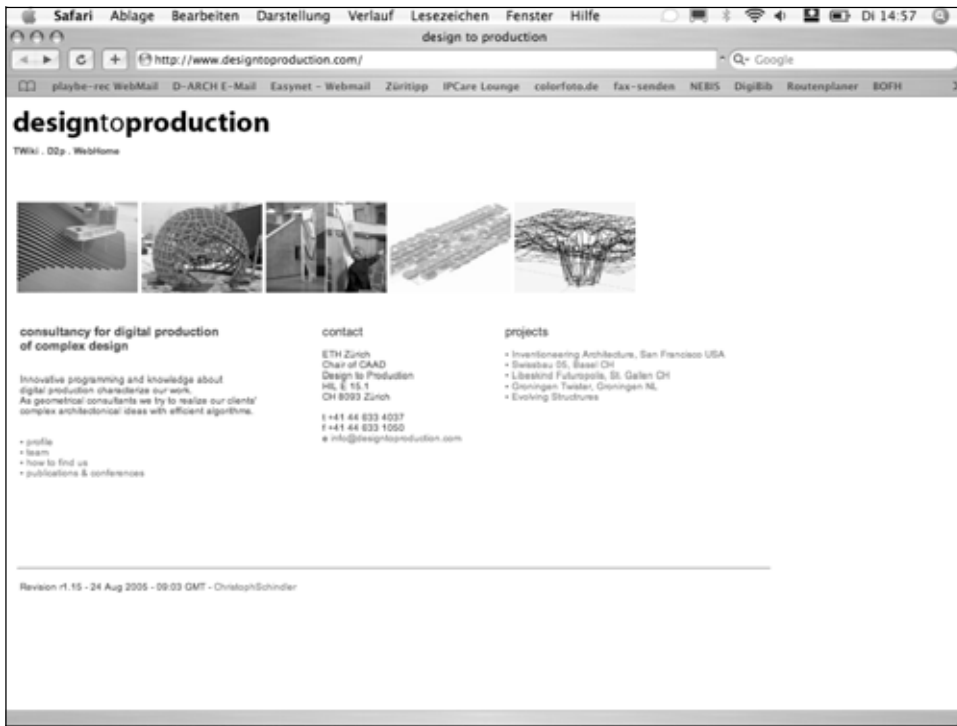
1

generative design with real
applications



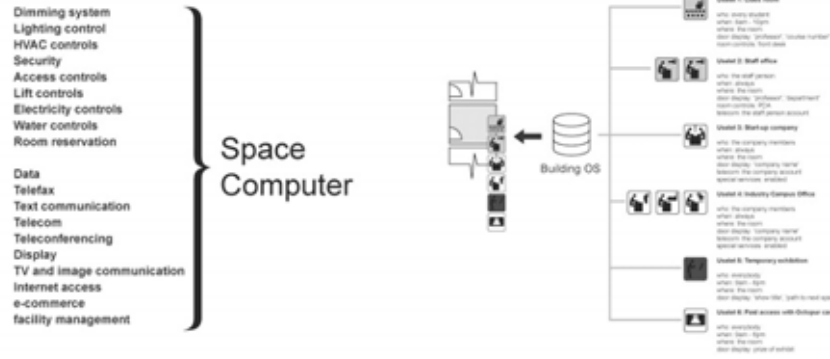
national stadium beijing





a building as a service platform

OMA - AMO



© OMA - AMO 2002



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



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



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



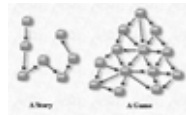
ongoing projects:
ETH world / CAAD buildingIP ->
ETH science city (2006+)



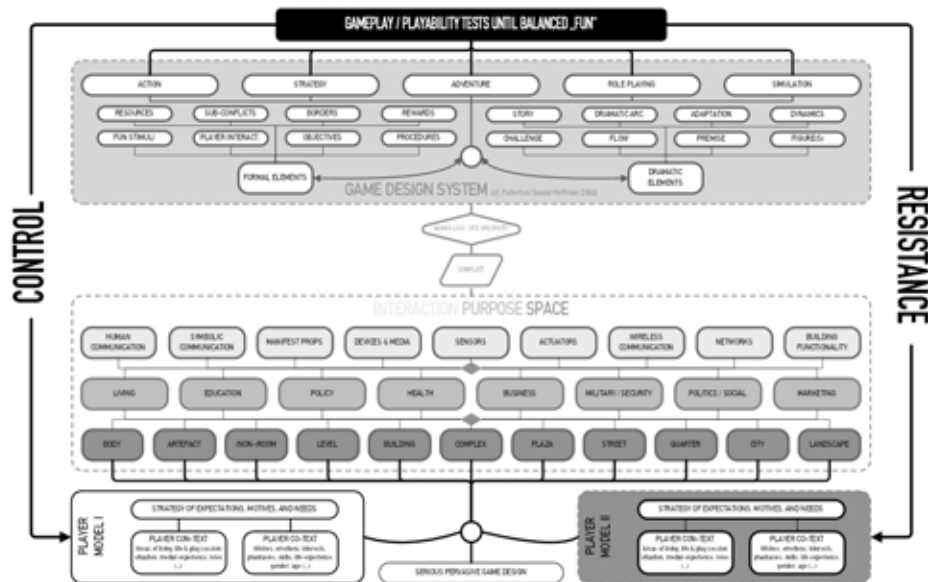
what are serious
pervasive games?

serious pervasive games combine =

- 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, space-time, interactions, challenges & rewards, drama, closure)



some history digging:
technologized game & play architectures

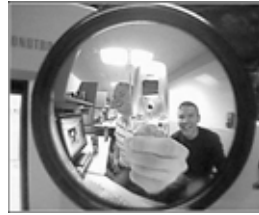


projects

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



third party serious pervasive game examples



Microsoft - „I Love Bees“ marketing for Halo2 (Xbox): Web + public payphones + real actors + collaborative gameplay

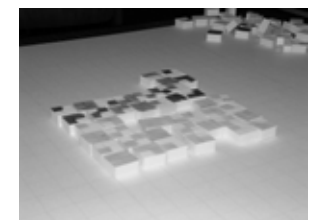
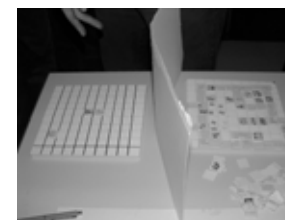
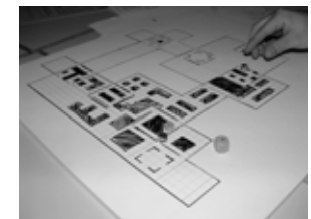


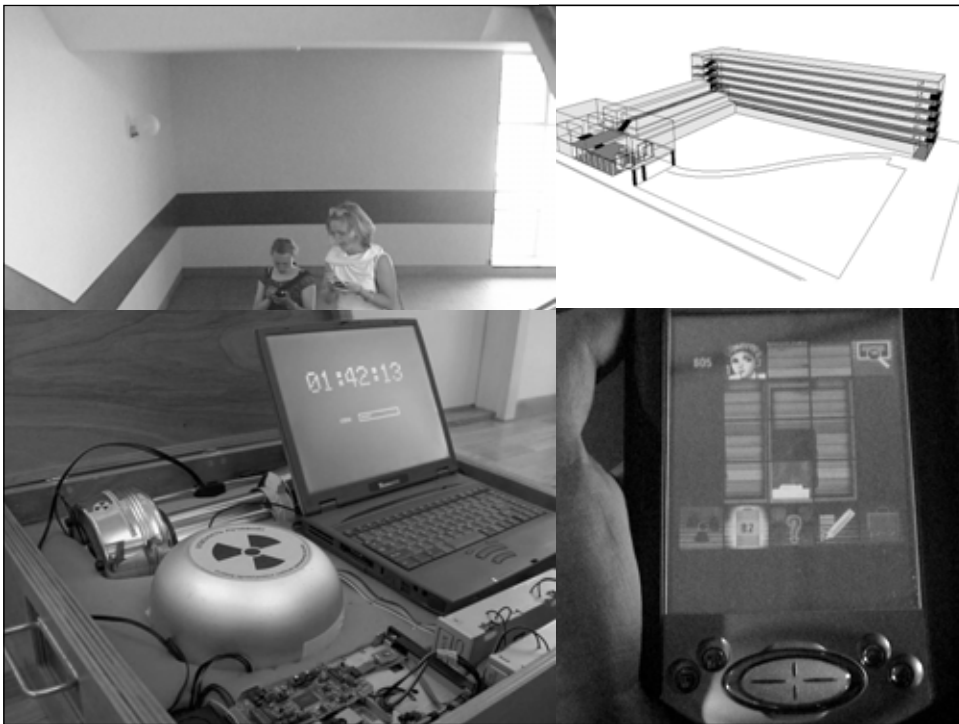
MIT - „Environmental Detectives“ emergency bio learning: PDA + GPS + virtual actors + collaborative gameplay

exemplary prototyping methods I



exemplary prototyping methods II





serious pervasive game design: policy



CONVIVIO

serious pervasive game design: policy

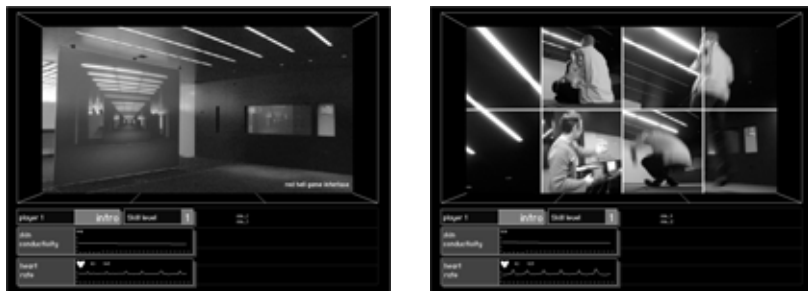


serious pervasive game design: policy



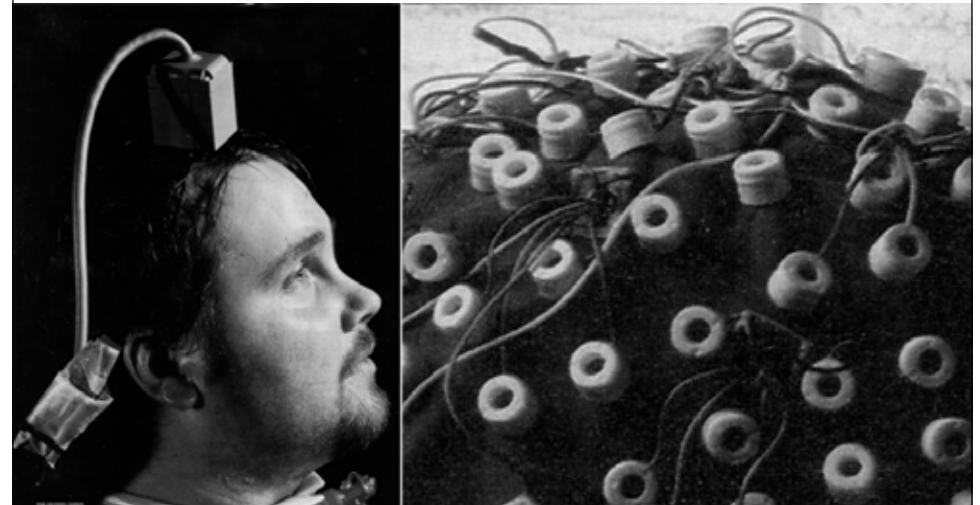
„Spirits of Split“ touristic marketing: Collectible cube puzzle + citizen participation + live action role playing

serious pervasive game design: health



„lightFight“ health care & room control: Wearable biofeedback + IP enabled room functionalities + psychophysiology

serious pervasive game design: health



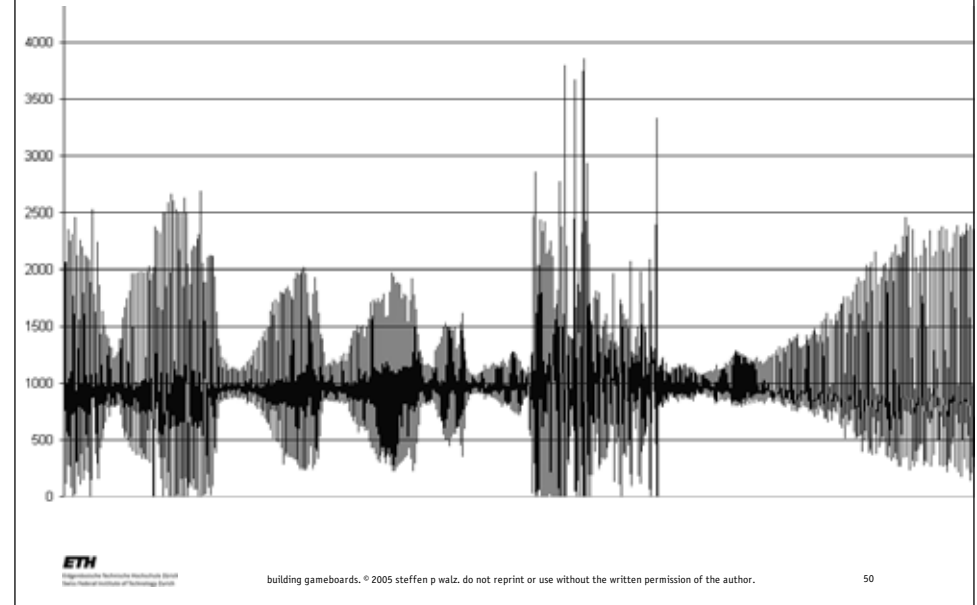
serious pervasive game design: health

Microsoft Excel - unterseebaug2.xls

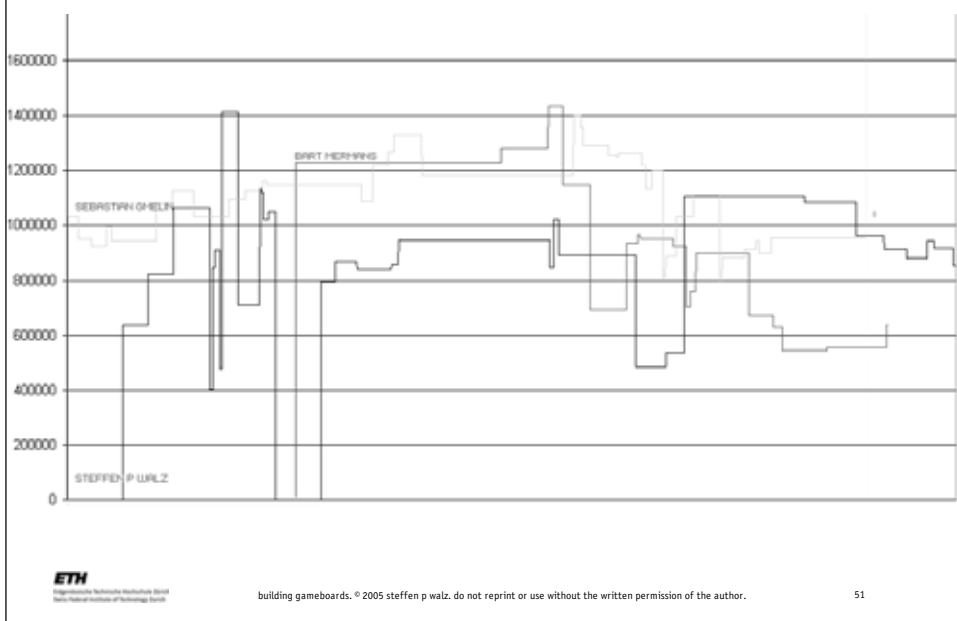
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2	33	246	960	0	0	33	290	713	0	0	33	288	920	0	0
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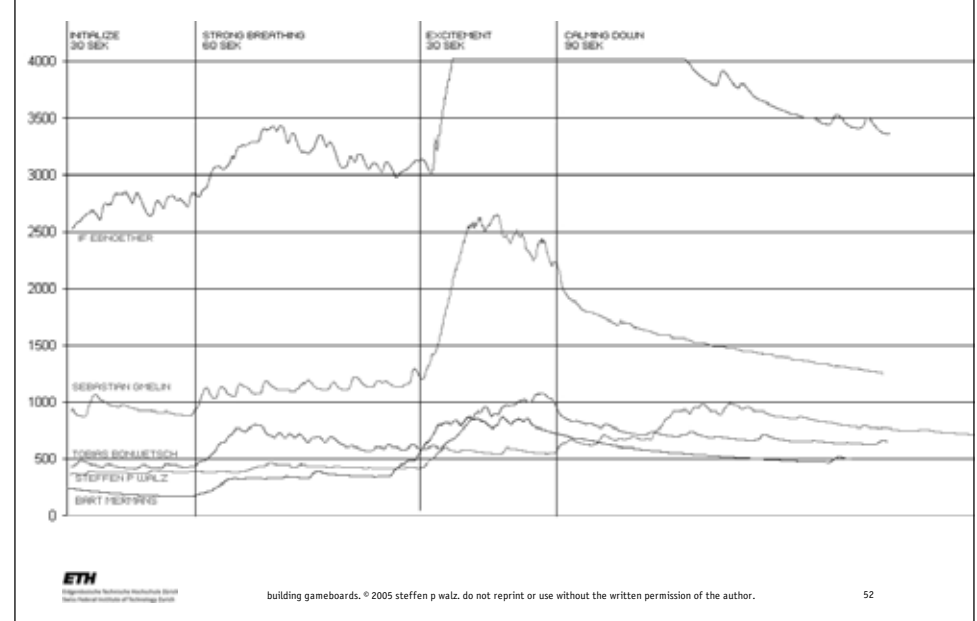
serious pervasive game design: health



serious pervasive game design: health

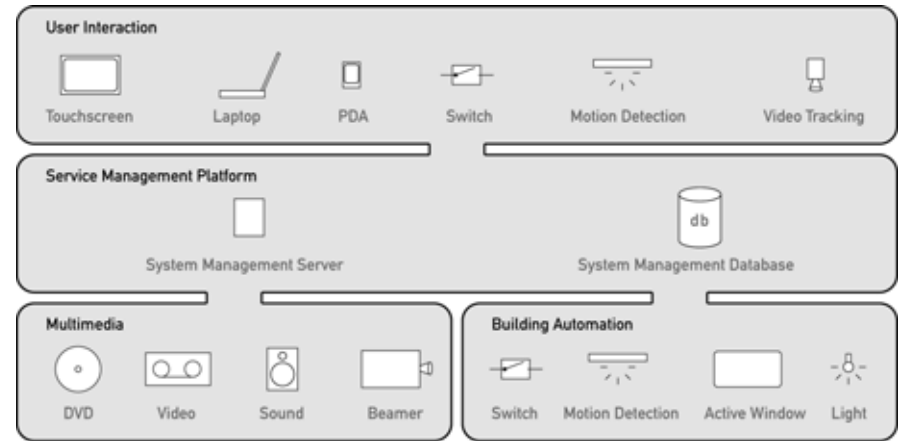


serious pervasive game design: health





serious pervasive game design: health

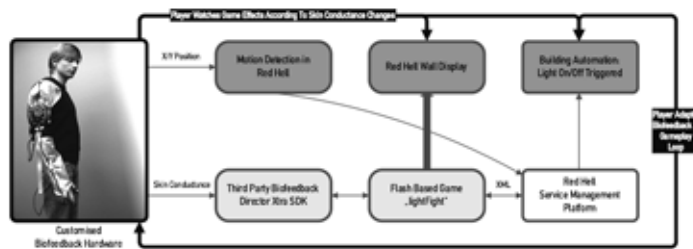


ETH

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serious pervasive game design: health



ETH

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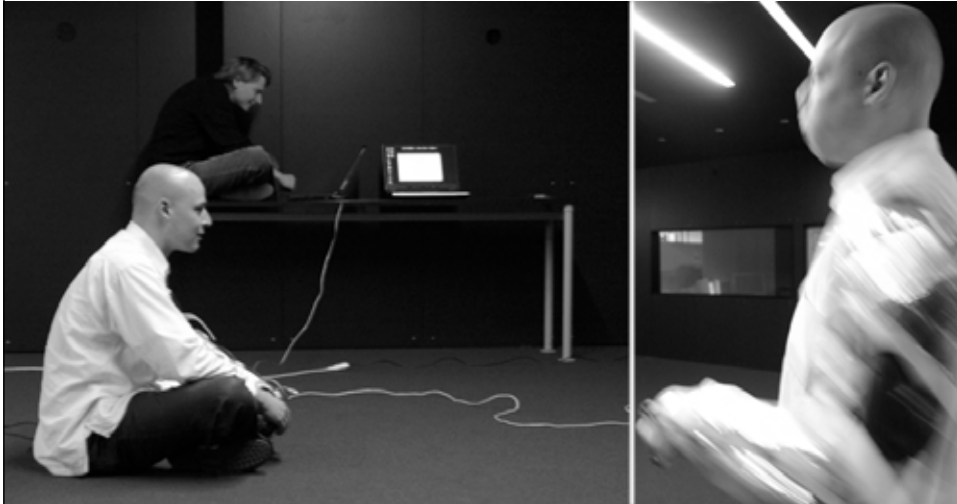


ETH

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serious pervasive game design: health

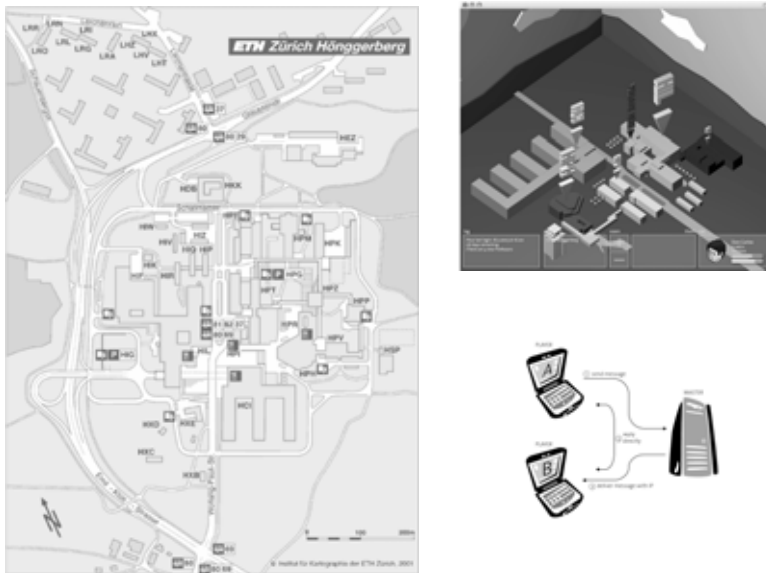


serious pervasive game design: education

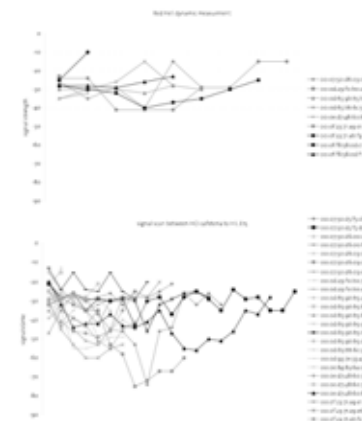


„ETHGame“ e-learning & community building: Mobile computer + WLAN positioning + massively multiplayer

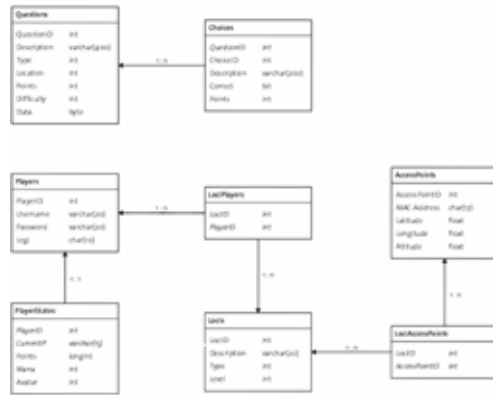
serious pervasive game design: education



serious pervasive game design: education



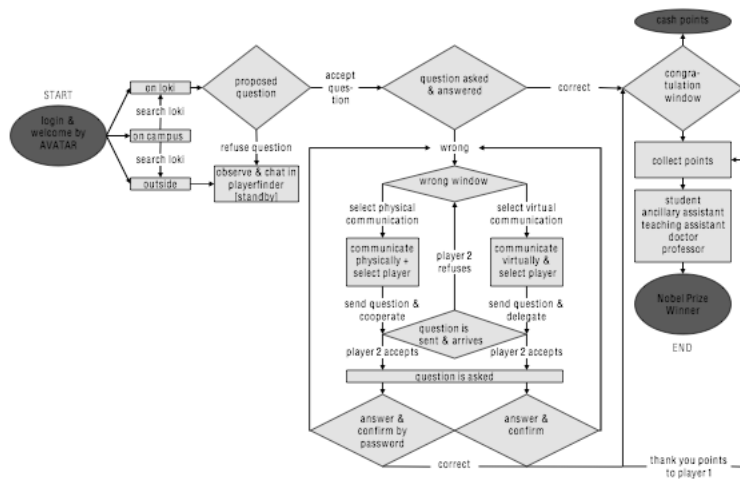
serious pervasive game design: education



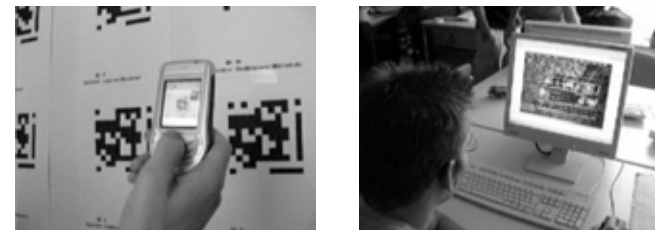
serious pervasive game design: education



serious pervasive game design: education



serious pervasive game design: education II

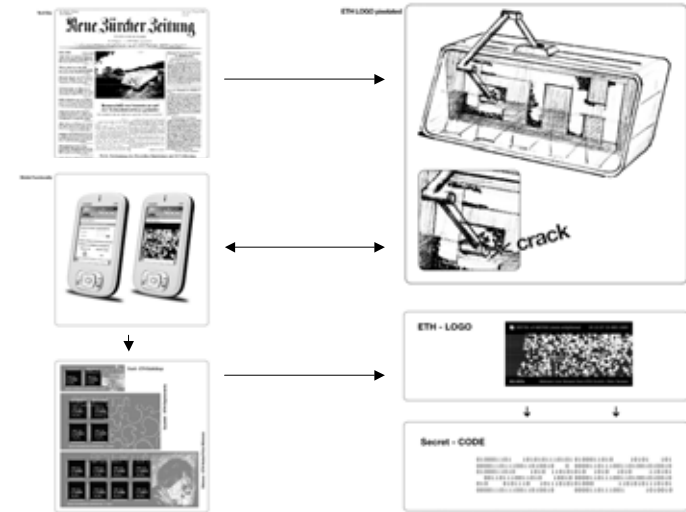


„Who's afraid of the black man?“ study program learning & community building:
 Cell phone camera + semacode scanning + GPRS + Online multiplayer application

serious pervasive game design: fundraising

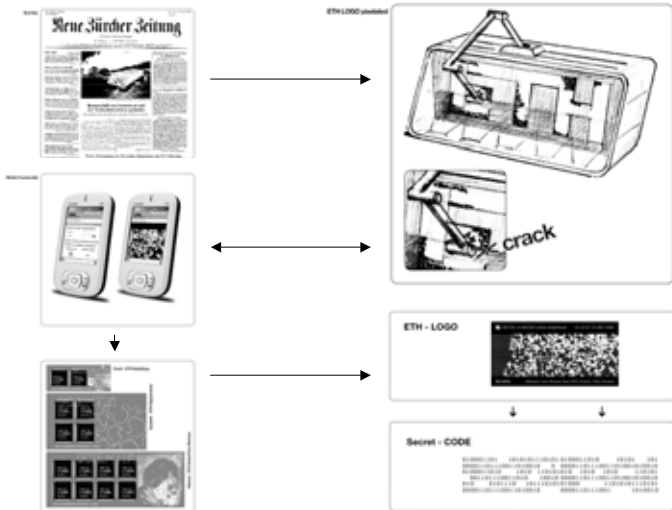


serious pervasive game design: fundraising



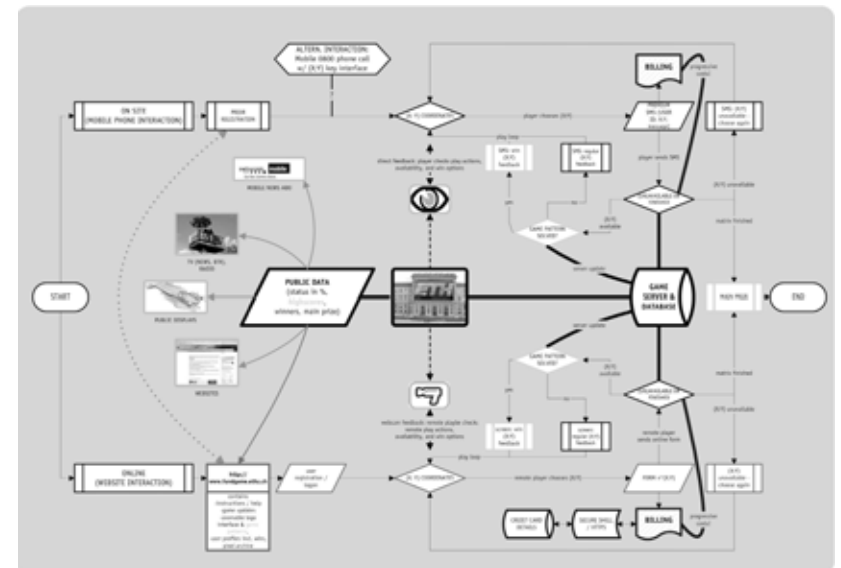
„ETH Fundraising“: Web + cell phone + alien invasion + public robotic display + chance prizes + collective gameplay

serious pervasive game design: fundraising



„ETH Fundraising“: Web + cell phone + alien invasion + public robotic display + chance prizes + collective gameplay

serious pervasive game design: fundraising



serious pervasive game design: business



Chaos Computer Club & Bbtel GmbH
„Blinkenlights“ (2001):
Cell phone + media augmented facade



CAAD & Bbtel GmbH:
Cell phone as universal control device (displays, functionalities, sensors)

next steps: MassivelyMultiplayerAudioRealityGames =

- 1) 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

next steps: MassivelyMultiplayerAudioRealityGames

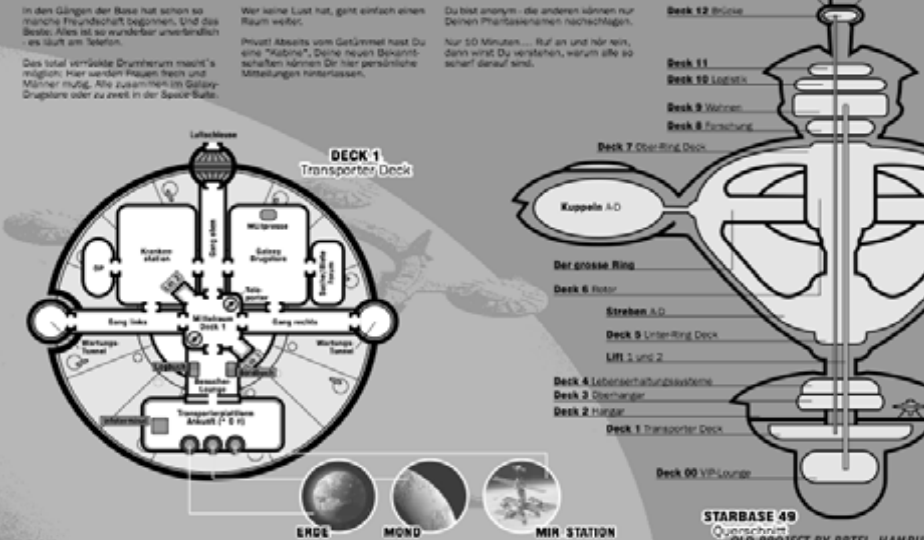
DER FABELHAFTTE CYBERSPASS



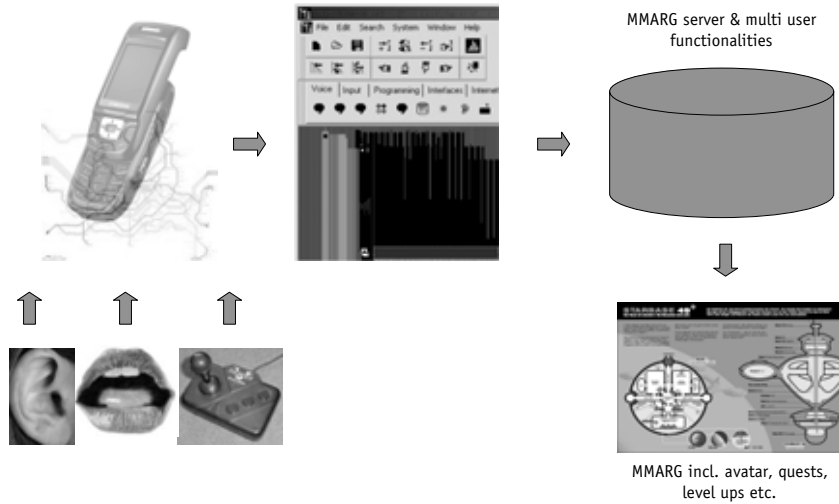
next steps: MassivelyMultiplayerAudioRealityGames

STARBASE 49

Der Raum ist abstrahiert. Die Menschen sind nicht.



next steps: MassivelyMultiplayerAudioRealityGames



discussion



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