

# **WalkAbout - An Experimental Virtual Environment for Learning**

Prof. Peter Parnes  
ArcTech Learning Lab

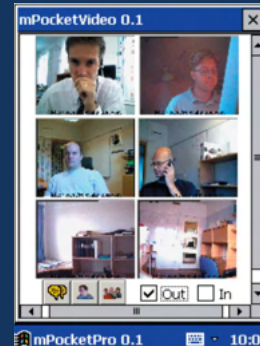
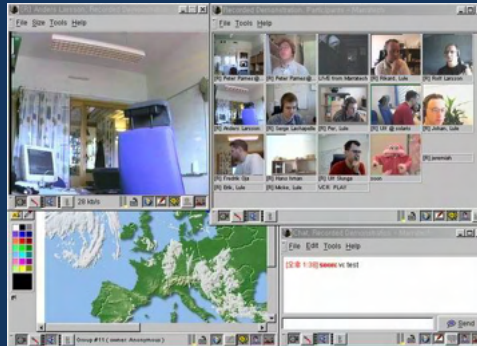
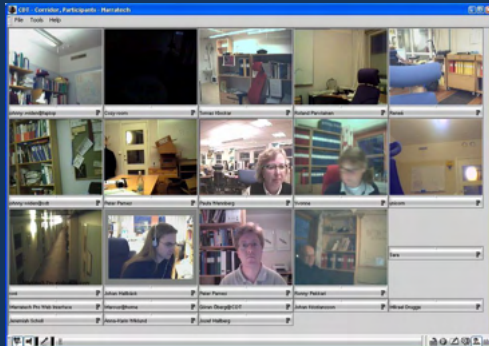
Universeh 210602

<http://www.parnes.com/blog/>



# Background

- Video conferencing for learning is boring.
- Hard to engage students online using traditional tools.
- Learning should be fun.
- Tools should encourage engagement and wanting to learn.
- I have been working with online meeting tools since 1994.
  - mStar - Marratech - Google Hangouts



# Background: Dialogica

An application for helping people with disabilities (aphasia) express themselves using avatars and animations, chat, speaking trees etc.



# Dialogica: helping users express themselves

- Multiuser
- Choose avatar
- Choose animations
- Choose worlds
- Chat - predefined and own
- Text-to-speech
  - different voices
- Real-time translation
- Voice chat
- Static 3D
- iPad primarily



# WalkAbout - An Multiuser Experimental Virtual Environment for Learning





# Different 3D-worlds



# Many Avatars (150+)



# 3D-Positional Audio

Audio changes with distance. Natural break-out rooms.





# Web Screens for External Content

## Create your own Learning Environment



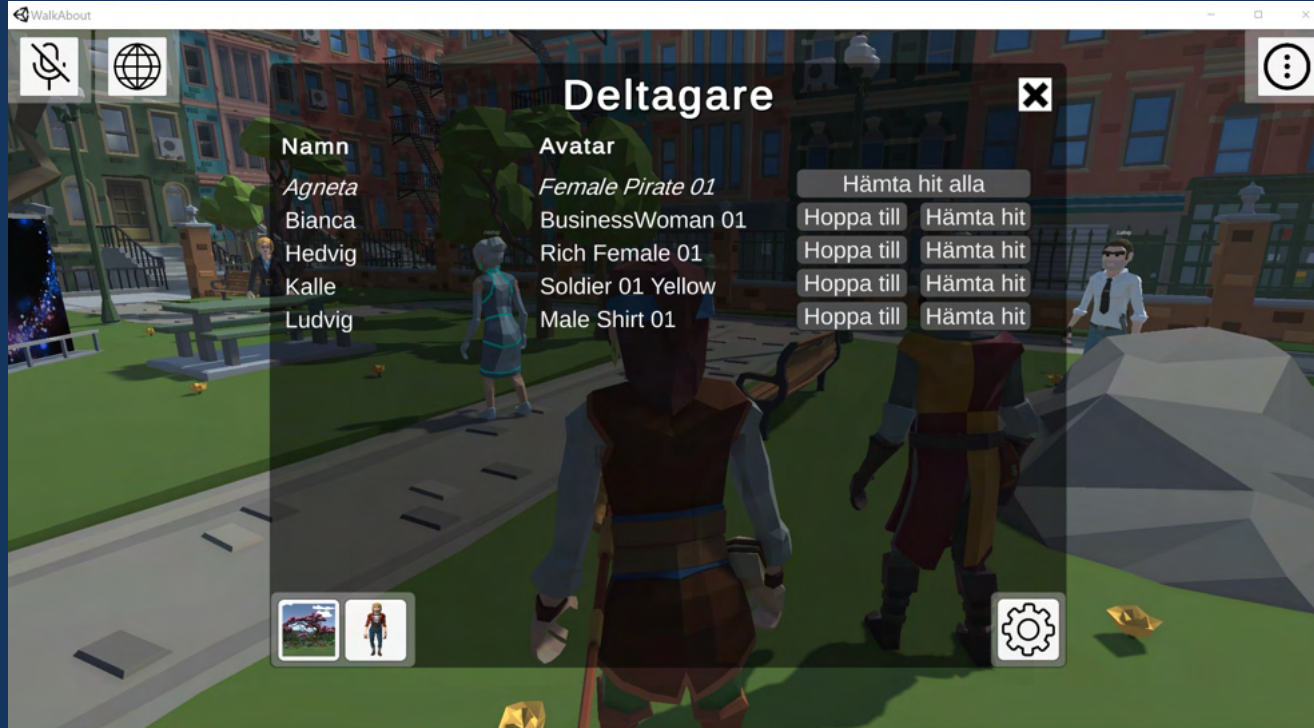
# Multiuser

Multiuser, 25-50 participants per room

Multiple rooms - jump between rooms



# Move Students Around



# Some Learning Scenarios

1. Live lecture(s)
  - Break out groups by moving to specific points
2. Prepared students presentations.
  - They build their own presentation environment.
3. Social interaction and spontaneous meetings
  - Hangout
4. Ask questions
  - Teachers and bots



# WalkAbout Usage

- Learning
  - Children
  - Students
  - Adults
- Work
  - Social
  - Meetings
  - Connection 24/7
- Other Events
  - Recruitment
  - Information in general - bots





# Status

- *Not released yet - internal testing*
- Platforms: iOS, Mac, Windows
  - Probably work on Android and Linux as well but not tested
- Many worlds
- Many users
- Voice chat
- Web screens
- UI half-baked - needs new icons
- UI Swedish only
- Some animations - more later

# The Future

- Internationalization
- Integrate text chat from Dialogica
- Real-time translation
- Animations
- 3D-Objects
- Web Screens part 2
- More UI work
  - Visual components for e.g. audio reach
- Beacons to show interesting points
- Persistence - save and load environments
- Bots that help with learning.



# Extensions

- Emotions
- Avatar customization
  - Clothing, skin color, attributes
- Weather & Time of Day
- Text to animation with AI



# Make it Fun

Fireworks  
Loot boxes  
Mini games  
Paint guns  
Stickers  
Horses  
Arcade Games



# How can You use WalkAbout?







# **Professor Peter Parnes**

[peter.parnes@ltu.se](mailto:peter.parnes@ltu.se), +46702392995  
[@peterparnes](#), [www.parnes.com/blog/](http://www.parnes.com/blog/)  
<http://www.facebook.com/peterparnes>