



Let's do it
CREATIVELY

Virtual & Augmented Reality In Education

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MECB

WECEB



EU Funded Course: On Eco Innovation & Sustainable Development (for adult trainers/teachers)

Malta, Sep 2011


www.mecb.com.mt/training



Presentation Outline

1. Virtual Reality
2. Augmented Reality
3. Applications for adult learning
4. What will the future look like?

Presentation Outline

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1. Virtual Reality
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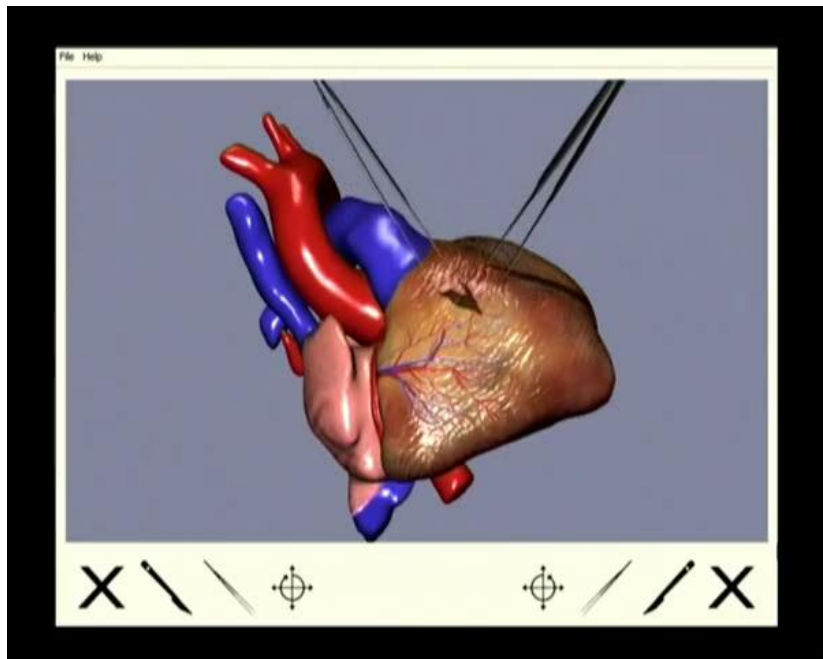
Virtual Reality

UC Davis
KeckCAVES

"Quake 3 Arena
Level Renderer"



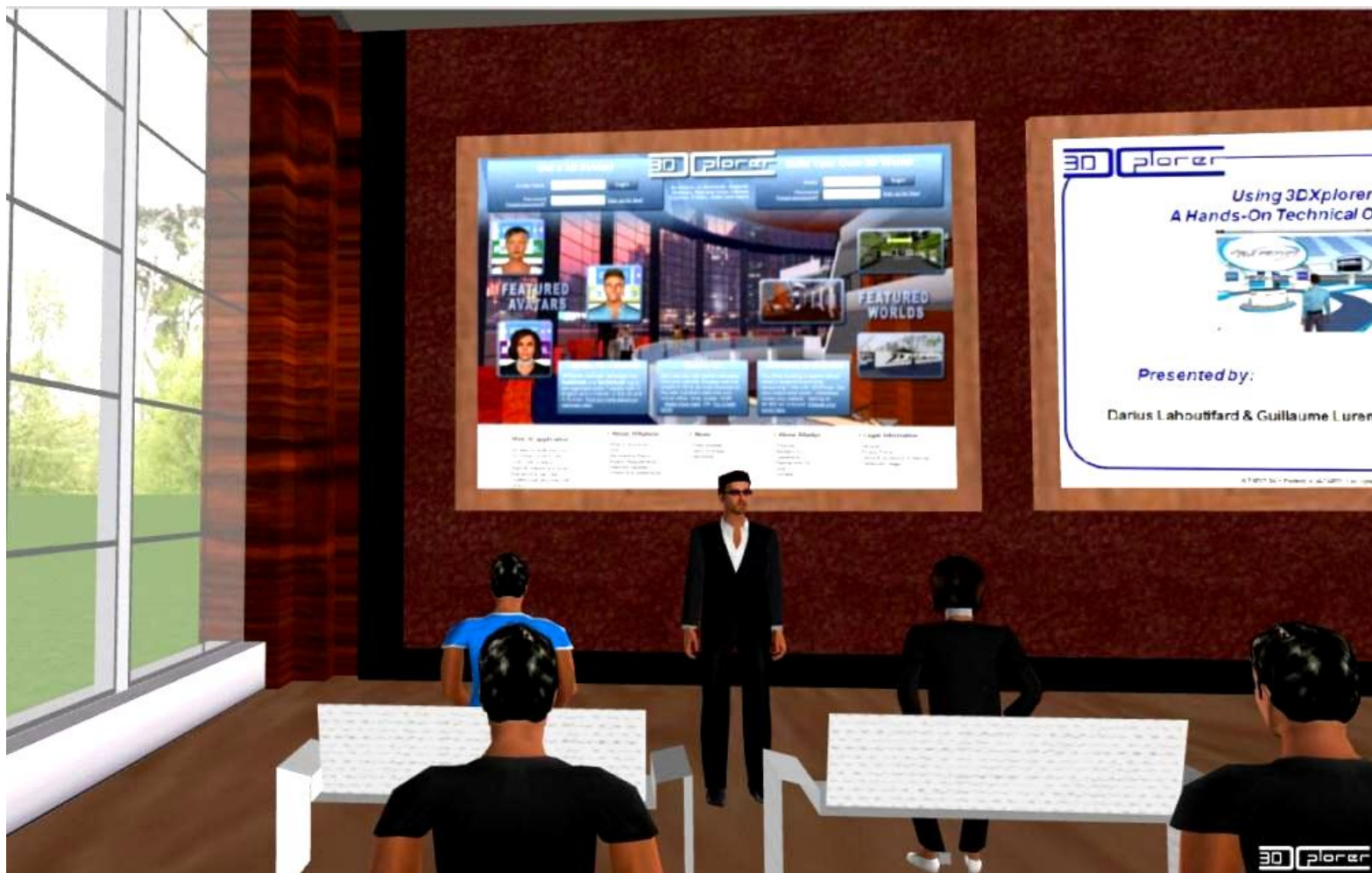
Virtual Reality



http://www.youtube.com/results?search_query=virtual+reality+training&suggested_categories=27%2C28%2C25&page=3

<http://www.youtube.com/watch?v=Gnq-8iaOcXk&feature=related>

Virtual Worlds



Ohio State University: Second Life Campus



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Augmented Reality



Real Life



**Virtual
Reality**





Zugara: Augmented reality online store



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3D modelling in science

Toyota Live Demo

3D modelling in geography

AR Sights Live Demo

3D modelling in biology

Learn AR Live Demo

Why is Augmented Reality useful in Adult Education?

- Allows students to visualize and interact with inaccessible objects
- Allows trial and error simulations
- Possibility to view complex data in 3D
- Includes real world objects
- Students can experiment with different potential real world scenarios
- It is possible to engage the learner in new ways
- Individual discovery trails
- Trial and error possibilities in real scenarios
- Create a space you don't have



AR in sports: Learning pool



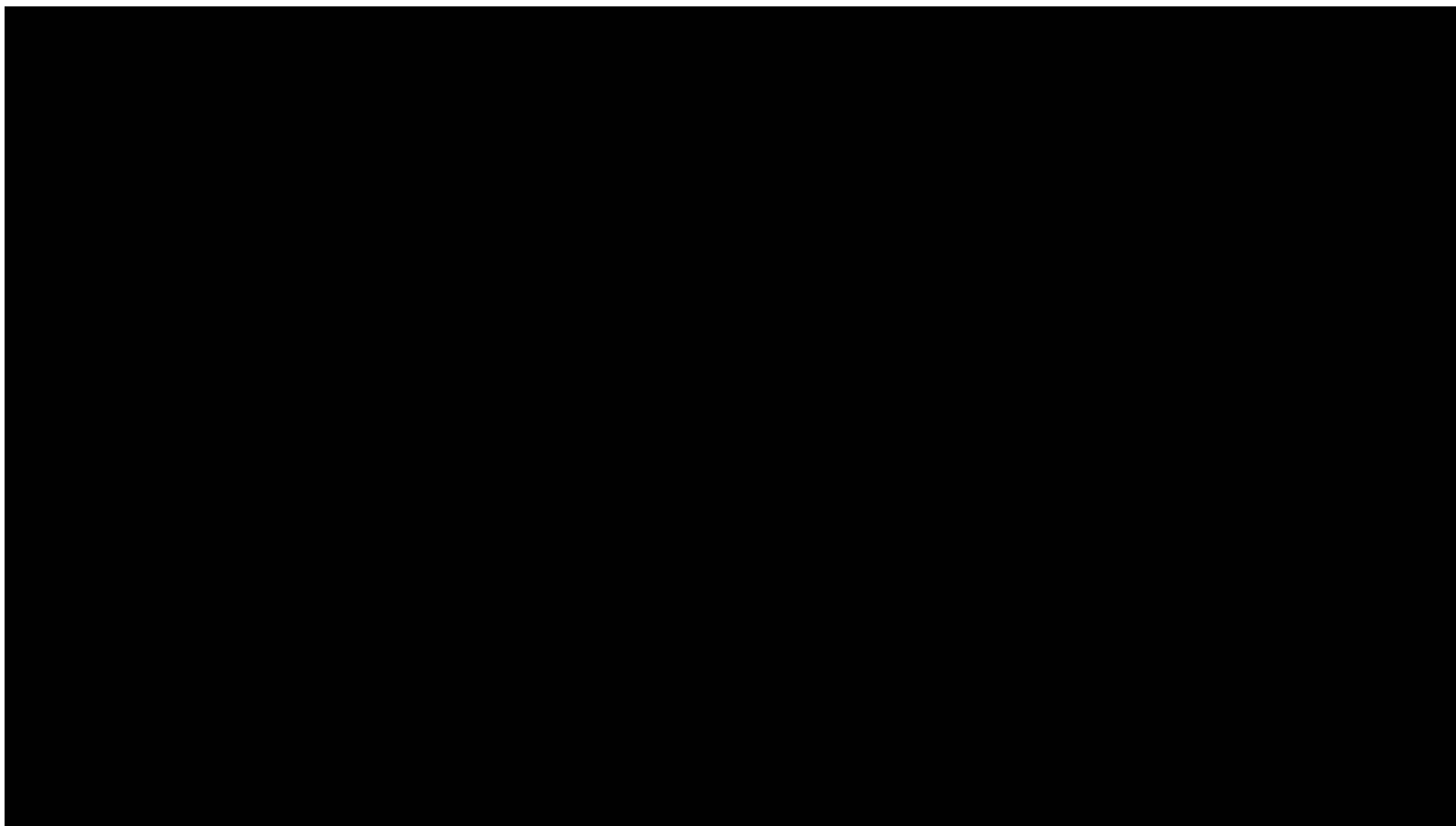
<http://www.youtube.com/watch?v=AENJxqR0g48&NR=1>

Real adult problems: Learning how to change the printer's toner!



<http://www.youtube.com/watch?v=AENJxqR0g48&NR=1>

Assisted repair and maintenance of complex tasks: Research at BMW



<http://www.youtube.com/watch?v=P9KPJIA5yds&feature=related>

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Home

Press Room

Innovation Union

+ Why?

+ Key initiatives

+ What it means to me

Key documents

Innovation made in the EU

EXPERIENCE INNOVATION

Innovation Union Lab

Augmented reality

Tales from the future

Videos



Augmented Reality – Innovation in your hands

Augmented Reality (AR) is used in a growing number of applications ranging from film production to industrial maintenance, medicine and education. The central idea is to add virtual objects to a real scene.

How? The demonstration below is for you to try!

Do you want to know more about augmented reality applications and research? [Click here!](#)

INNOVATION UNION AUGMENTED REALITY



GETTING STARTED

1. Augmented Reality requires a printed marker to work. If you don't already have one, [print one here.](#)
2. Turn on your webcam. Turn off any pop-up blockers.
3. Launch the AR experience by clicking the "launch" button.
4. Hold your printed marker so it faces your computer's webcam.
5. Aim at the spheres by twisting and turning your marker and fire by pressing the "space bar".

LAUNCH THE AR
EXPERIENCE

Key technology trends

- Increase in mobility
- Increase connectivity
- Increase in ubiquitous computing
- The internet of things

Communication Costs

	Year	Delay in Hours		Cost	
		1	100	1	100
Means	Year	Destination	Destinations	Destination	Destinations
Pre-railroad Mail	1840	252.00	260.30	0.25	107.17
Railroad Mail	1850	48.00	56.30	0.03	85.17
Telegraph	1850	0.08	8.30	7.50	750.00
Web Communication	2011	0	0	0	0

Adapted from Malone, T. W. (2004). *The future of work: how the new order of business will shape your organisation, your management style and your life*. Boston: Harvard Business School Publishing.

Mobile Devices & Applications



Human interfaces

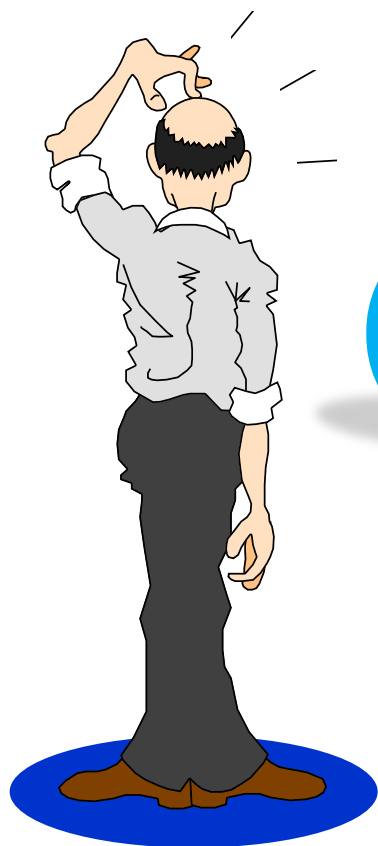


<http://www.youtube.com/watch?v=Mf44bWQr3jc&feature=related>

Conclusion

- Keeping a look at the future
- Identifying emerging opportunities
- Learning how to generate new solutions and possibilities
- The future looks full of opportunities

Let's strive to do the best with all that is available



Comments & Questions...

thank you



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