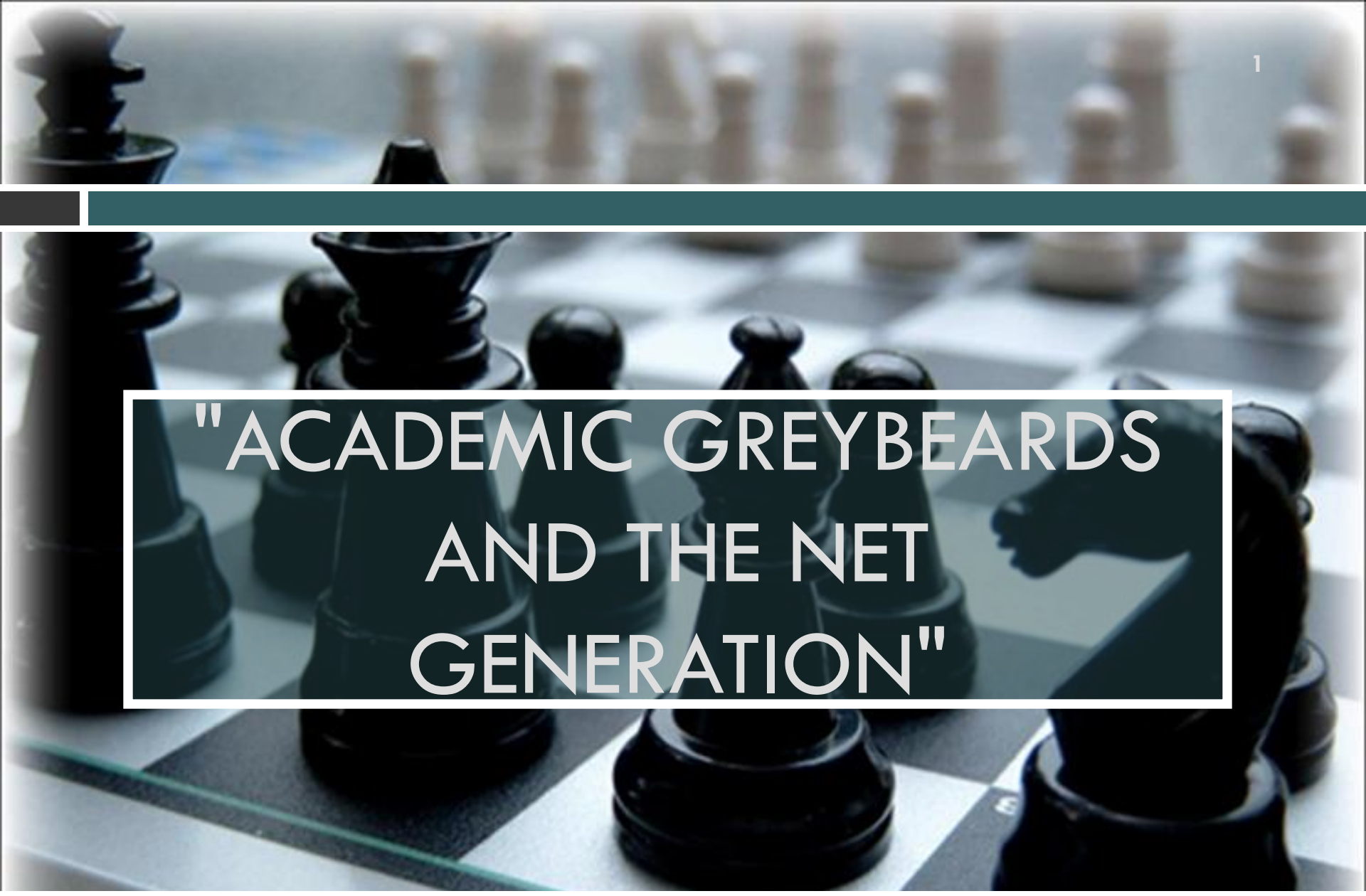
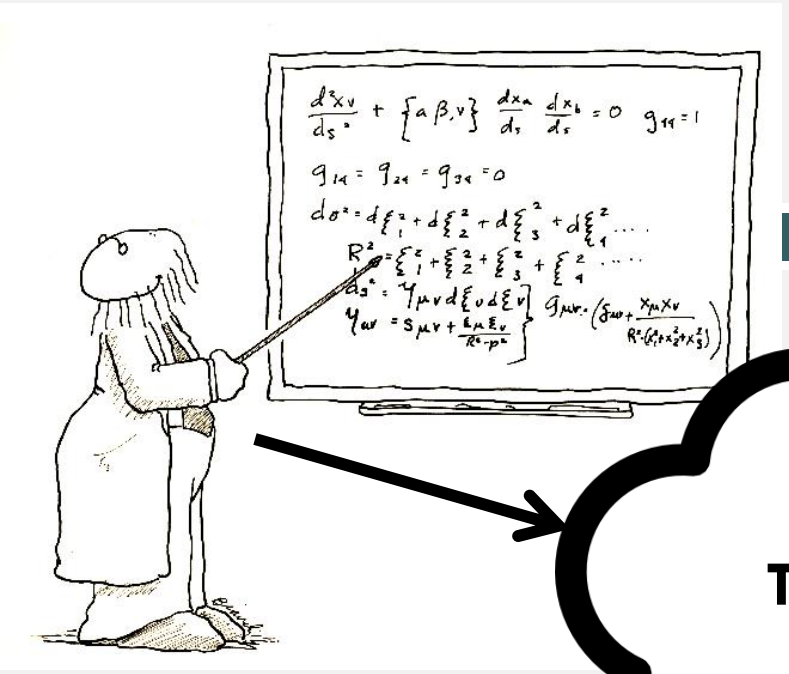


"ACADEMIC GREYBEARDS AND THE NET GENERATION"

Derek Smith

UCT

Greybeard's Approach



Teaching Space

The Wise Guru has
Information
Knowledge
Wisdom

?

The Great Unwashed

The Net Genegeneration?

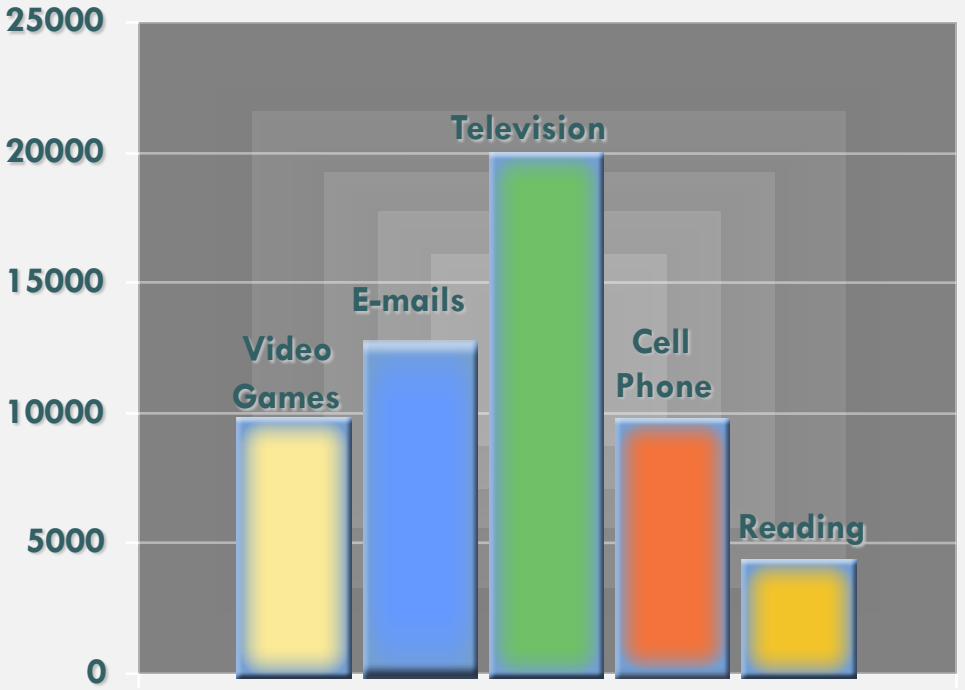
- Born in or after 1982
- Gravitate toward group activity
- 8 out of 10 say “it’s cool to be smart”
- Focused on grades and performance
- Busy with extracurricular activities
- Identify with parents’ values; feel close to parents
- Respectful of social conventions and institutions
- Fascination for new technologies
- Racially and ethnically diverse

Educating the Net Gen Diana G. Oblinger
www.educause.edu/section_params/conf/aascu05/AASCU

Media exposure

By age 21, the average person will have spent

- 10,000 hours video games
- 200,000 emails
- 20,000 hours TV
- 10,000 hours cell phone
- Under 5,000 hours reading



— *Prensky, 2003*

The Net Generation Students

- Digital, Connected, Experiential, Immediate, Social
- Teams, peer-to-peer
- Engagement & experience
- Visual
- Things that matter

Educating the Net Gen
Diana G. Oblinger

“complete and undivided attention”

- *Continuous Partial Attention*
- Defined as ”the majorly irritating modern computer-related phenomenon of doing several things at the same time without focusing on any of them”.

(Is It Me or Is Everything STILL Kak, Richman & Schreiber, Two Dogs, 2009)

Is anybody listening?

Will universities stay relevant?

Posted by: Don Tapscott on **10Jun 2009**

- Last week I wrote a substantial essay for the Edge arguing that the universities are entering a period of crisis.
- I argued that there is a widening gap between the model of learning offered by many big universities and the natural way that young people who have grown up digital best learn.

- www.edge.org

Don Tapscott explains.....

- “Growing up digital has changed the way their minds work in a manner that will help them handle the challenges of the digital age. They're used to multi-tasking, and have learned to handle the information overload. They expect a two-way conversation”
- “What's more, growing up digital has encouraged this generation to be active and demanding enquirers. Rather than waiting for a trusted professor to tell them what's going on, they find out on their own on everything from Google to Wikipedia”

Don Tapscott concludes....

- The professors who remain relevant will have to abandon the traditional lecture, and start listening and conversing with the students — shifting from a broadcast style and adopting an interactive one.
- Second, they should encourage students to discover for themselves, and learn a process of discovery and critical thinking instead of just memorizing the professor's store of information.
- Third, they need to encourage students to collaborate among themselves and with others outside the university.
- Finally, they need to tailor the style of education to their students' individual learning styles.
- This is not fundamentally about technology per se. Rather it represents a change in the relationship between students and teachers in the learning process.

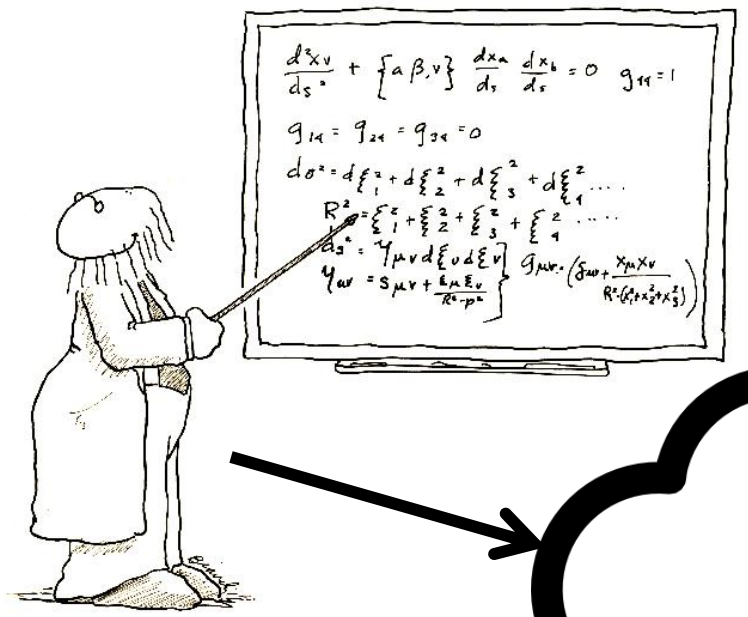
The Greybeard Way

- The lecture hall is a prime example of mass education. It came along with mass production, mass marketing, and the mass media.
- "You teach the same thing to students in the same way and assess them all in the same way."
- Pedagogy is based on the questionable idea that optimal learning experiences can be constructed for groups of learners at the same chronological age. In this view, a curriculum is developed based on pre-digested information and structured for optimal transmission.
- If the curriculum is well structured and interesting, then large proportions of students at any given grade level will "tune in" and get engaged with the information.
- But too often, it doesn't work out that way.

"A Vision of Students Today".

- One of the YouTube smash hits in 2008 is a short video called "A Vision of Students Today". 3 million downloads!
- Created by Michael Wesch, at Kansas State University, it is a stinging indictment of the education delivered by standard large-scale American university.
- Their verdict: Nothing much has changed since the early nineteenth century, when the blackboard was introduced as a brilliant new way to help students visualize information.
- They painted a grim picture of university life — huge classes, teachers who didn't know the students' names, students who didn't complete the assigned readings, multiple-choice exams that were a waste of intellectual capital.

video



Information
Knowledge
wisdom

Learning Space

The Net Generation

Here is one!

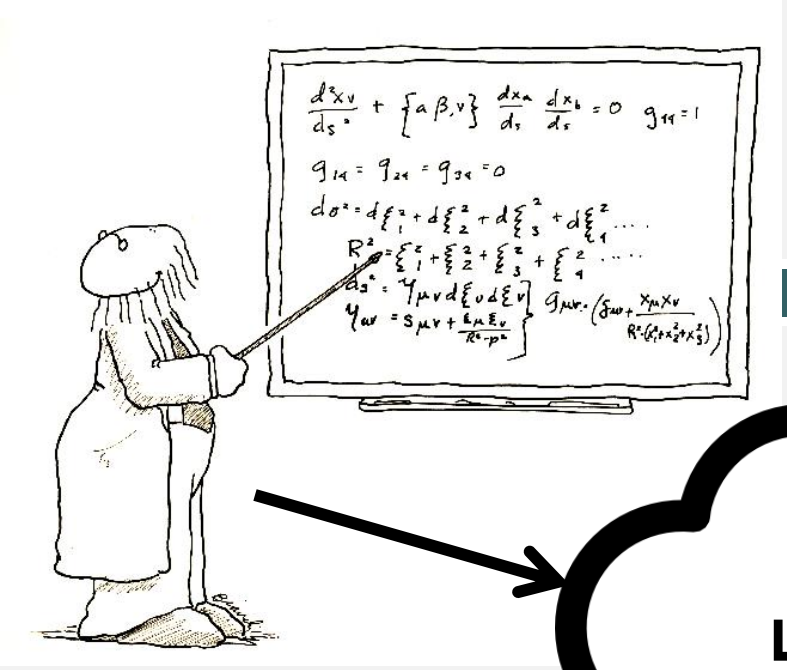
?

In summary, the differences include:

Students	Faculty
Multitasking	Single or limited tasks
Pictures, sound, video	Text
Random access	Linear, logical, sequential
Interactive and networked	Independent and individual
Engaging	Disciplined
Spontaneous	Deliberate

—adapted from Himes, 2004

Academics 1.0



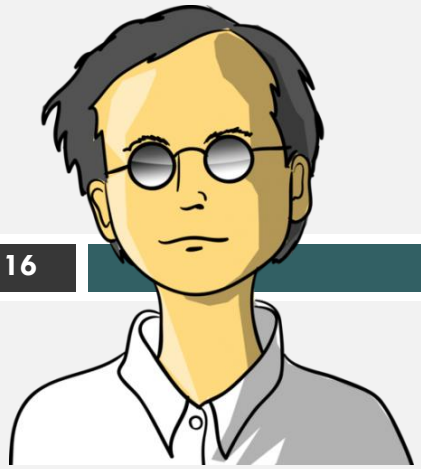
Learning Space

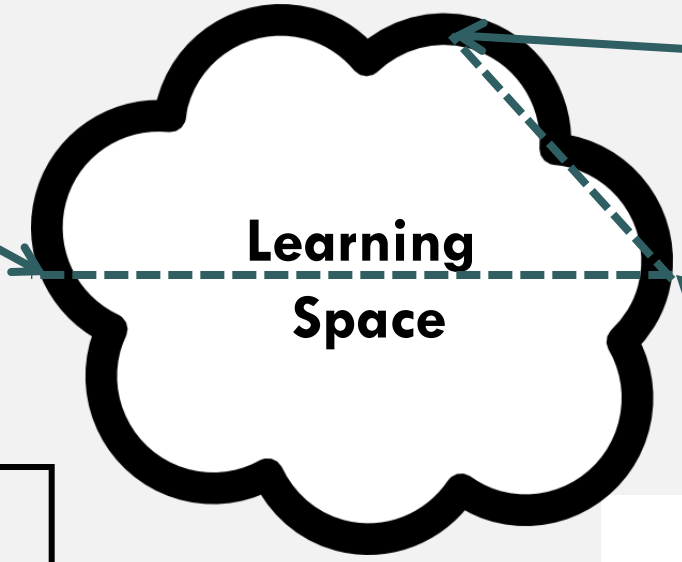
?

<u>Grey-beards aka Baby Boomers</u>

- **Re-skilling issue**
- **Shortage of vocational IT academics**
- **Boomers retiring soon**
- **Taking their knowledge with them**

2.0 Generations





WWW

Previous content:
Languages -1G to 4/5G
Maturity Models- 5 stages
Cellphones up to 3G+
and now.....

Web 2.0
Learning 2.0
Academics 2.0

How much information?

- The Berkeley Corporation estimated that print, film, magnetic, and optical storage media produced about 5 exabytes (5 billion gigabytes) of new information in 2002
- International Data Corporation estimated that approximately 160 exabytes (160 billion gigabytes) of *digital* information was created, captured, and replicated worldwide in 2006

  [Bergstein, B. 2007. So much data, relatively little space. *Business week*, March]
- In mid-2008, Google engineers declared that 1 trillion unique Uniform Resource Locators (URLs) had been indexed

  [http://googleblog.blogspot.com/2008/07/we-knew-web-was-big.html]

But, how much of this information is unique?

Internet connectivity January 2009

Internet Software Consortium: https://www.isc.org/solutions/survey

World 625.2 million hosts

Africa 2.0 million hosts

World ranking:	33	South Africa	1.3 million hosts	=	65.4%	of Africa total
	53	Morocco	276.0 thousand hosts	=	13.8%	
	60	Egypt	175.8 thousand hosts	=	8.8%	
	88	Kenya	29.6 thousand hosts	=	1.5%	
	89	Kenya	27.3 thousand hosts	=	1.4%	
	. . .					

Web searching: some inconvenient truths . . .
Peter G. Underwood, 2009

Search engines fall short!

Northern Light	16.0
Snap	15.5
AltaVista	15.5
HotBot	11.3
Microsoft	8.3
Infoseek	8.0
Google	7.8
Yahoo!	7.4
Excite	5.6
Lycos	2.5
EuroSeek	2.2

(LAWRENCE, S. & GILES, C.L. 1999. Science, vol. 285, No.5425, 15 July:295)

The best recent estimate is that Google finds about 20% of what is potentially available on the Web

Web searching: some inconvenient truths . . .
Peter G. Underwood, 2009

What makes up the “invisible” web

Sites which are

- Intranets and controlled-access
- Have content in non “html” formats
- Consist of numeric and full-text databases

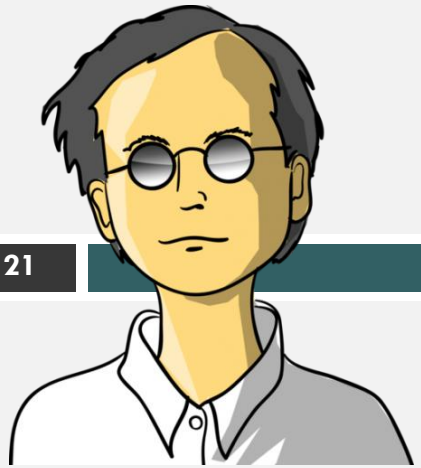
This constitutes *at least* 58% of all web sites.

Retrieval may depend on being granted access; some sites may be retrieved using special search tools.

Invisibility is increasing and so is the range of tools!

Web searching: some inconvenient truths . . .
Peter G. Underwood, 2009

Academics 2.0



Web 2.0

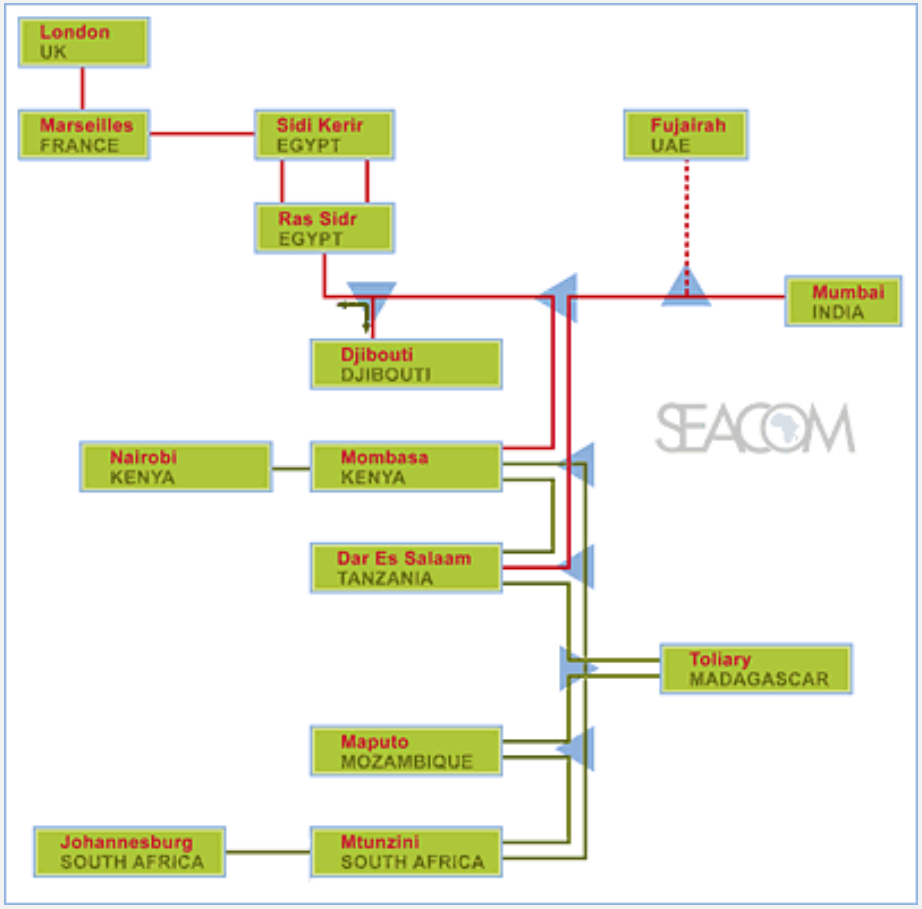
New competencies:
Advisor,
Facilitator,
Mentor,
Librarian
Administrator

Learning Space

Problems in the Learning Space:
Curriculum standards (ACM, AIS)
University focus
No local knowledge sharing
Weak links between universities

SEACOM opens many doors

- The two fibre pairs have a combined capacity of 1280 Gbs.
- An additional express fibre pair is provided from Kenya to France into a PoP in Marseilles with 640Gbs capacity.
- Another express fibre pair is provided from Tanzania to India into the PoP in Mumbai with 640Gbs capacity.
- SEACOM has procured fibre capacity from Marseilles to London as part of the SEACOM network.
- Mtunzini Media event 28th May 2009



What needs to happen……

- The IT lecturer must change their relationship with students
- The IT lecturer must understand their customer's needs better
- The IT lecturer must stay on top of their body-of-knowledge

Opportunistic Proposal

- We all want South Africa to be a winning nation
- The increased bandwidth is almost here

Build a common portal for IT academics where all South African courseware and research is shared, reusable and online

- Provide a comprehensive support system for IT academics allowing for the sharing of knowledge, problems and solutions
- Possibly managed and resourced by greybeards!

Getting onboard.....

- UPSpace at the University of Pretoria
- Cape Town Open Declaration
- OpeningScholarship Project
- The open access movement

  Putting peer-reviewed scientific and scholarly literature on the internet. Making it available free of charge and free of most copyright and licensing restrictions. Removing the barriers to serious research.
- OpenCoureware at MIT
-

Some Potential Problems

- Intellectual property
- Requires trust
- Requires cooperation
- Requires openness
- Needs a win-win focus

- I am keen to see your reaction!