OPPORTUNITIES FOR EXPANSION

Electronic cloud learning system on personal devices via satellite

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E-SAT PLATFORM FOR LEARNING, LIBRARY AND PUBLIC HEALTH

Electronic cloud learning system on personal devices via satellite



Africa as Emerging Market

- Potential growth more than anywhere else!
 - Land
 - Population
 - Economics
- Africa is bigger than all of the developed countries
- Less than 9% of African population are aging in both
- U.S. companies are cutting back in telecoms (more on this)
- China has expanded its program for development in roads and factories

Constraints in African Market

- Low level of infrastructure
 - Electricity
 - Fiber optics
 - Water supply
 - Education
- Threat of On-site working
 - Low level of hygiene
 - Financial risk
 - Safety issue
- Solution:
 - Self-sustaining tele-education and tele-working packages



possibly linked to climate change Conflict zones

Actual Size of Africa



Africa Map



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China

Africa Population Concentration



Africa Population Growth

Percent Change in A1/B1 Population, 2050-2000



Data Source: Down-scaled A1/B1 population projections used in the 2007 IPCC report were obtained from the Center for International Earth Science Information Network (CIESIN) at Columbia University.



Africa: Population vs. Infrastructure



Fiber Optic Terrestrial Backbone



Internet User Comparison



Internet users in 2012 as a percentage of a country's population

E-sat Learning vs. E-Learning

- Dedicated in-class training via satellite channel
 - Data
 - Voice
 - Video
- Adaptive off-class learning experience via satellite cloud network
 - Multiple learning configuration
 - Multi cultural teamwork experience
- Secure cost-effective learning in remote area
 - Access anywhere anytime
 - Minimize on-site expert personnel in conflict zone
 - Supporting area with no-fiber optic
 - Africa, Amazon, West of China and central Asia
 - On Sea
 - On Air



E-sat Learning Essence

- Using well-proofed platforms:
 - HD-connect
 - SpeedNet
 - Global and Local servers
- ConOps
 - On-class phase (lecture)
 - Off-class phase (pre- & post- lecture)
- Well designed Human-machine interaction:
 - i-Pad App as system-user software
 - Samsung App as second generation
- Green learning
 - Paper-less
 - No unnecessary transportation





E-sat Learning Core for Learning

- Mass education+ personalized learning
- Lectures Self-mastery Interactive tutoring

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Cloud Computing

Storage / Dat

- Developing Skills for
 - Problem solving ability
 - Creativity
 - Cross-cultural teamwork
- Integrated new tools:
 - E-learning
 - M-learning
 - Cloud storage
 - Cloud computing
- Content and material:
 - Open-source
 - Copyrighted

E-sat Learning Hardware Architecture



E-sat Learning Software Architecture



E-sat Learning Product Tree



More than Teaching Tools

- Health-care
 - Consulting system
 - Training system
 - Treatment for patients
- Multi national corporation:
 - Cross nation R&D tools
 - On-job /on-site training
 - Extension to video conferencing
- News and Entertainment enterprise
 - News feed
 - HD and 3-D Group Cinema
 - K-TV (karaoke)
 - Interactive games and movies



Conclusion

E-sat Learning is:

- Solution to <u>Knowledge Base Economy</u> and the engine of *knowledge* growth,
- Platform to educate <u>Knowledge Base Economy</u> work force,
- Infrastructure for sustainable, flexible and efficient access to resources anywhere at anytime for <u>Knowledge Base Economy</u>.
- Value added solution to current issues on education and E-Government by;
 - Providing uniform system solution to all citizens with diversity,
 - Managing infrastructure effectively with leading edge technology centralized for efficient resource allocation.



Vision

E-sat Learning will provide reliable state of art *end to end* services *worldwide* to improve quality of life *particularly* in remote areas.

E-sat Learning *is* currently being evaluated in <u>Mexico, Ethiopia and</u> <u>Nigeria</u> *to deploy and to commission* for operation that will use the existing infrastructure such as; space segment allocation, proven infrastructure and user-friendly interfaces.



Vision- cont.

E-sat University

The future of academic institution with one million plus enrolment to implement the concept of <u>Education without Borders</u> :

- Instruction by leading scientist and expert,
- Reachable to remote areas with diversity to over-come physical, cultural and gender dilemma.



Thank you for your kind attention

