



Thank you Chairman and thank you, Moderator, for your kind words.

Ladies and Gentlemen, friends and colleagues,

Thank you for joining us at this session on ICT Innovations on Providing Affordable Access to Education. It is of course a difficult task to lead us into this panel discussion by following in the footsteps, or better, to stand in the shadows of these two great gentlemen who spoke here to us in the opening sessions today. I am of course no match to Professor Negroponete or to Professor Malitikov, so I will follow the example of our distinguished chairman, and put myself at your service as your humble servant in this exercise.

This morning we will look at the successes and challenges of providing for affordable computing models for schools.

So, to lead us into the subject, I would like us to address three fundamental questions:

First: **Why?** Second: **What?** And third: **How?**

You see, we in business are simple-minded, and when we prepare something at the board level, it needs to be so simply presented that you can tell the essence of the issue to your CEO or chairman of the board in the few seconds that you have together with him in the elevator. So, simply put, we ask: **why** do we look at this issue, **what** are we doing about it, and **how** (or how well) are we doing it.

Let me elaborate a bit on the **Why**, because this is the first question you will need to answer when you come with the concept of computing at schools to a teacher, parent, school principal, or your board member. Why are we looking at this concept of putting computers into schools?



The answer may appear simple to us who are deeply committed to the use of information technology for development: Because we see computers – in the broadest sense - as the physical embodiment of what we call **Access to the Information Society**. And Access to the Information Society is in many eyes equated with access to the Internet via a computer. To us, Access to the Information Society holds many promises, and it helps if we recall these briefly.

On the one hand, access to knowledge and information is one of these promises, and helps to liberate and educate people around the world. The information in the Internet-based Wikipedia, a collaborative work of volunteers, has been very favorably compared with the Encyclopedia Britannica, in terms of content, depth, correctness, timeliness, etc.

So, access to information and knowledge is one of the reasons why we want every child in the world to benefit from ICTs. And that is also, I guess, one of the reasons behind the olpc project.

On the other hand, The having access to the Internet also offers the promise of more participation in society, of more citizen engagement, of more transparency in government. Access to the Information Society also means an increased freedom of expression, one of the fundamental human rights. NGOs, primarily, not exclusively, are rightly pushing to expand these rights.

We also, as companies in business, want to be able to tap into a workforce capable of working with current working methods and technologies. And the computer has held its sway in so many different areas that it is hard to say where it is not present any longer. And other companies simply see this as a great market, or want to lay the seeds for the markets of the future.

As you can see, depending on where you come from, from which stakeholder group, there can be many reasons, many explanations to the question of why we are looking at affordable computing models for schools. So, let's keep this in mind later on when listening to the panelists.



Now, if we think that these promises of the Information Society are benefits, then obviously we want to extend the to the population, and to impart the understanding of their benefits and use in the educational arena.

But when it comes to translating the hopes and aspirations, the promises and endless opportunities into concrete education measures, then we need to ask more precisely:

**What** is it that we are trying to accomplish here? And that is the question of content.

From a content perspective, we can look at various variables, such as education in maths and sciences, but also new forms of cultural and artistic production and expression. While education is usually local, the Internet opens the window to the world and offers the chance to look beyond boundaries. While maths and sciences education may appeal more to corporate interests, some of the most exciting uses of ICTs by young people has been in the artistic and cultural adoption of new media and in the expression through video and other means. Similarly, social networking through sites such as facebook or myspace and youtube is now a mainstay of our youth. However, not all content is appropriate for all age groups, and the issue of child protection online is now a major debate, at times seemingly in conflict with the values of freedom of speech and freedom of information.

Then, finally, the how. **How** are we providing access to the information society in education?

Here we can divide this into four aspects,

a) **technology**, i.e. access to the network through PCs and mobiles and other devices,

b) **content** delivery of educational content,

c) **stakeholder** involvement, and



d) **governance** issues.

\* a) Looking at **technology**, much has been said about low-cost computing models, and we can be very grateful to Nick Negroponte for his challenge to the industry to come up with affordable products and solutions to rival his, because now we can look at very differently priced products than we could, for example, 15-20 years ago. 15 years ago, a laptop would cost 2,500 dollars, today, we can buy a much more powerful Netbook for 300 dollars. Still, the challenge is still on, since there are many innovations in that little XO that would make a wonderful addition to the currently commercially offered laptops or netbooks. Nicholas yesterday got me by surprise when he purposefully dropped an XO in front of my feet onto the floor.

However, I respectfully disagree that laptops are the only solution. What we have witnessed over the past 15 years is that mobile phones, and the mobile networks to go along in providing connectivity, have been the real boom, so that today we need to look at a much wider universe of access options. Today, much of the information is available through mobile phones, and in most if not all parts of the world, mobile phone penetration is by far higher than fixed lines or PC penetration rates. And the applications have proliferated, so that today, we can clearly deliver educational content also through mobile phones and applications.

Just as an example, we have just completed a first phase of a mobile learning project in South Africa which uses a mobile social networking application (Mxit), that is in wide use by young people in the country, to deliver maths tutoring to students. This project shows how appropriate adoption of technology and content as a complementary measure can improve student interest and engagement in maths education.

But we also need to realize that, regardless of the technology, it is not sufficient to simply drop hardware into the schools, be that hardware as affordable as it may, but that we need to look at the



big picture. We know of the mountains of unused hardware in schools, because the eco-system of education has not adequately been taken into account. And we see the problems of sending used computers into the third world where they rot in landfills with terrible environmental and human health effects.

\* b) So, the second item in that education eco-system is **content** delivery, and here, we realize, and I can speak from our own experience, that teacher involvement is key. Pedagogical approaches need to be properly developed to accompany and enhance technology, so that it is not simply a technology push, whereby we translate educational content from the analogue to the digital world, but an integrated approach. I also would like to point out that it is not so much the teachers that need to learn how to do things right, but it may also be us technology savvy people to try to understand better what education really means in terms of, for example, socialization of students in a group, etc. So, I think it will be interesting to hear from our panelists how they approached their projects, and what we can learn from them.

If we look at the total cost of ownership of computing projects in schools, we need to further realize that it is not just hardware and software costs that make up the bulk of the costs of a project, but really that the bulk of the cost lies elsewhere, in teacher training, in maintenance cost and other running costs. Many projects have failed because running costs have been underestimated. Again, it would be interesting to learn the challenges and successes here in making education projects sustainable and not dependent on continued donations. Also important is the question of how well is the project doing, in the sense of: how well is it achieving its proclaimed targets? Are we reaching the goals on time, and within budget? And what happens if not?

Finally, we get to the crux of the challenges, because items often overlooked, or thought about too late, are **stakeholder** involvement, and that includes expectation management of the different



stakeholders, and **governance** issues, i.e. how is a project run, how are problems addressed, what are the escalation routes if something goes wrong for example.

So, I don't want to take much more of your time, and give the panelists a chance to give their opening remarks. But for you in the audience, it will be useful to ask yourself these questions when you hear the panelists:

**Why** are they doing what they do?

**What** are they doing, and what is the content?

**How** are they doing it, and how well?

Ladies and Gentlemen. Thank you.