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I would like to build on a few critical issues that developing countries are facing today in the standards of implementation, in forming the rules and regulations, and challenges which are coming due to lack of legislations. Based on these critical issues, I would like to share some examples of how these things have been tackled which might pave the way for future strategies to handle these issues. So starting from the critical issues that we're facing, they have been talking about the standards such as the W3C Standards for Website Accessibility, or they also talk about the DAISY Standards, or the Digital Accessible Information Standards, which led to the content standards for accessible content. Most of these standards are based on the presumption that access technologies are being used by persons with disabilities. For example, a person with blindness will be using a screen reading software such as JAWS. These standards will address the issue of if a person is using or is trying to access a website using a screen reader, it should be accessible to this person. Next comes the challenge facing developing countries. The screen reading technology is heavily dependent on text-to-speech engines, and unfortunately, in most developing countries, the local language of the text-to-speech engine is not there. So when we talk about these standards, W3C Standards that are to be implemented by making website accessible through screen reading software, if there is no screen reading software, then local language has hardly any meaning to these standards implementation. There are certain basic technology related gaps which need to be plugged in for local languages in developing countries for the effective implementation and acceptance of standards. Even if there are text-to-speech engines that are being developed, they are not complying with global standards such as the SAPI or the SSML, and this makes it every difficult for screen readers like JAWS to actually start speaking in local languages because we can't expect Freedom Scientific in the U.S. to be able to work with so many different kinds of APIs, which different TTS and makers of different language are trying to develop on their own. There needs to be an effort, preferably in the open-source domain, for development of text-to-speech engines in local languages for developing countries.

Another issue bothering persons with disabilities in developing countries is the cost of the technology. Generally speaking, the ratio of the cost of living and the level of earning between developed and developing countries would be anywhere between 1 to 6 to 1 to 10. The same job in a developed world might be earning ten times more in terms of the real money, but the situation is not as bad as it might sound because the cost of living itself is also different. I mean, the cost at which I'm able to buy food in India is ten times cheaper than what I would spend in U.S., for example. That doesn't relate to access technology or the technology as a whole. Opposed to the cost that remains the basic things like food and transportation, the technology is actually cheaper in the U.S. than in India. I would have to pay more in India than in U.S. for a copy of JAWS because of transportation charges and other kinds of overheads that might incur due to this. You see, a basic computer would cost less in the United States than in India. When talking about these access technologies, a person with disability in the developing world can not actually dream of buying these basic access tools with their own money. The day-to-day lack of resources, and sometimes the lack of right policies, the right kind of support systems, like the federal funds available to the citizens of U.S., such kinds of things are not available in developing countries. Governments are not able to invest those kinds of funds to acquire the basic access technologies for persons with disabilities.

Now to bring this to a more positive mode, let me describe a few of the good practices. We've tackled some of the problems that I'm mentioning. The policy or the regulation can really change the situations. The cost is practically dependent on quantities. One thing which is to the positives of the developing countries is the number of persons who are living there. This means a larger number of potential markets that are untapped. If, for example, you are selling 100 copies of software in U.S., there might be a potential of selling a hundred times more copies of the same software in developing countries if the cost is made affordable. We might get the same profit by selling more numbers in developing countries at a lower cost rather than having a higher cost and selling lesser volumes. We had an example for the same thing in the mobile accessibility software where the cost was brought down to less than one-fourth by just projecting higher volumes. They were able to negotiate with the company that is selling the software and

were able to get the cost down considerably. The procurement law for example, would ensure that the technologies which are accessible are procured at a larger number. It will not be left to an individual to acquire access technology, but once it becomes a part of government policy or government law, it would enhance the market a great deal and subsequently bringing the cost down. When we talk of the legislations, they really look upon the UN agencies in the framework. For example, the UNESCAP had been observing persons with disability from 1993 to 2002 and subsequently, from 2003 to 2012, and as a part of that first decade, one critical area which was being tackled was legislation. As seen in these concerted efforts made by the UNESCAP, not many countries in the developing world actually enacted the laws for the protection of rights of persons with disabilities. The Indian law for the protection of rights of persons with disabilities is also was one the consequences of the efforts of the UNESCAP. This law currently does mention the accessibility and mobility environment, but whether that accessibility actually extends to the cyber world or ICTs is something which is not very clear and which needs to be made very clear in the laws that we need to enact. A similar kind of an approach would be required for accessibility or to translate the Convention on the Rights of Persons with Disabilities into the national laws of each and every country of the world in order to make these efforts required by the UN.

Another example is that the accessible content is a big challenge. The copyright issue is one of the big hurdles which we face in accessible content and in India, for example, the agencies which used to produce accessible content had to run after the agencies that are producing textbooks to get copyright permissions from them. After this law was enacted in 1995, one of the clauses said that the government is obliged to provide teaching materials and textbooks to persons with disabilities at a lower cost and at a certain age. Now these agencies are running after these textbook making agencies, and filed law suits saying that these agencies are not complying with this clause of the law. Now the textbook making agencies are having accessibility producers give them these books in accessible format.

One of the international efforts that is a good example is the DAISY for All Project. It is an international effort backed up by a private foundation and is a very good example in terms of bringing the ICTs to the developing countries. One of the biggest challenges in the developing countries has been that the awareness about the issues is very low. By developing the focal points for the implementation of DAISY standards in developing countries, we are taking this basic know-how to the various countries. These focal points are able to bring to the attention of the legislation agencies of the countries about the policies that need to be implemented in order to make ICTs accessible. Networks within the countries are being formed as part of the DAISY for All Project; for example, there has been DAISY Bangkok Foundation, a DAISY Forum of India, a DAISY Forum of Pakistan, and this network is bringing all the organizations concerned with this issue together, and together they are able to negotiate with the government to enact policies, to work on policies, to work on issues in favor of persons with disabilities. These issues are being tackled as part of the DAISY for All Project.