LONDON – NextGen@ICANN with University of Greenwich
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UNIDENTIFIED MALE: It is June 23rd. This is the Thames Suite. We're doing the NextGen ICANN with University of Greenwich.

NORA ABUSITTA: Jeff, shall we start? Great. We have to do the announcement.

Good afternoon, everybody. I am Nora Abusitta. I am the vice president for Public Responsibility Programs and Development here at ICANN. I'd like to welcome this distinguished group of students who have dedicated a long time to working on some thesis topics that are very relevant to ICANN and its work.

Before we get into to their project, I'd like to welcome also Dr. Aaron C. Van Klyton who had called me maybe nine months ago to discuss a potential collaboration between ICANN and the University of Greenwich. And to be honest, I was very pleased with this project. We are always trying to reach out to new people to attract them to the ICANN meetings and to the ICANN system, and more importantly we're trying to reach out to younger people. And so, for me, this fell into a lot of our focus areas whether it's education next generation engagement, and so we jumped on the opportunity and we worked for nine months with the University of Greenwich and these great students who were

willing to focus their thesis on topics around fragmentation of the Internet.

In parallel, we had commissioned a study with Boston Consulting Group on the result or the effect of fragmenting the Internet. Of course, there were things that the Boston Consulting Group could not cover in the short duration of their study, and so we had given the other topics to these students to study in more depth.

So I'm not going to bore you with more background to this. I'm sure you're all looking forward to hearing the findings, and I'll give you the floor. Thank you.

DR. AARON C. VAN KLYTON: Good afternoon, I'm Dr. Van Klyton. I was the overseeing supervisor for this project and it's my pleasure to introduce the panel and their research to you.

As we know and as we've discussed throughout the day and throughout the rest of this week, some European countries and other stakeholders have been somewhat vocal in their opposition to a U.S.-centric Internet, even securing the assistance of developing countries in their fight for a so-called pure multilateral governance. From this, however, an international discourse developed that can be thought of as a contested space of control and regulation similar to that of trading zones. The space is constituted by and through large organizations situated primarily in the west that fight for and concede various degrees of power over the Internet.

Mueller in 2010 argued that the Internet rested control away from nation states and that had made a contribution to a global society by disrupting the regulation of media content by these states. However, even if the states had some interest in reasserting control over its populous through changes in Internet governance, the disruption that Mueller refers to would suggest that older hierarchies such as the traditional nation state would be supplanted by sub-national and supra-national scales.

In the worst-case scenario, the Internet would be broken up into several Internets, otherwise known as "fragmentation" or "balkanization." In such case, the Internet would lose its global nature and be divided into smaller units, each one with a different sets of rules. International cybercrime, securing data across borders and the protection against terrorism all provide cogent reasons for some states to want to prefer a fragmented Internet.

The CEO of Kaspersky Lab claims that a fragmented Internet would primarily benefit governments and large corporations in protecting themselves. However, the multi-stakeholder model also has its critics. Former President U.S. Bill Clinton, in fact, claimed that although the multi-stakeholder process is ideal, the so-called multi-stakeholders are really just governments that want to control people by restricting their access to the Internet, somewhat of an extreme perspective.

But anyway, it is in this discourse about Internet fragmentation, specifically a fragmented domain name system and its potential consequences that our panel have investigated. The team sought to operationalize this debate from four different perspectives. Of course,

as we know, the decision to change the Internet structure – the governance structure of the Internet – is still being discussed. Therefore, their results are in many ways speculative in nature. However, their applications of theories and concepts could potentially open new avenues for discussion on Internet governance and new areas of research.

With that I turn the floor over to our first speaker, Janthira Engeset, who will create a landscape of social and political discourses of Internet fragmentation, thereby laying the foundation for the remaining three parts of the presentation.

JANTHIRA ENGESET: Thank you, Dr. Aaron. And good afternoon, everyone. My part of the resent study is analyzing the social and political impact of a potential Internet fragmentation. A discourse analysis was implemented in order to identify the potential winners and losers of Internet fragmentation. The analysis [focused] on discursive data in a social and political forums on the phenomenon of Internet governance, security, censorship and digital inequality.

In the recent years, there have been several incidents which have created several debates regarding security and privacy such as WikiLeaks in 2006 and Edward Snowden in 2013. These are triggered nation states to consider a shift in the Internet control. The fact that U.S. government is the one who ultimately controls the Internet is something many organizations and nations find misplaced as this as the

Internet is a global phenomenon which many nations economy has become increasingly dependent on.

The finding shows that all the nations wish to shift Internet control due to lack of trust and their wish to control cybercrime. There are two contrasting views regarding the shift. Former U.S. President, Bill Clinton, and a former House Speaker House Speaker, Newt Gingrich, are more skeptical to a change in Internet governance due to the fact that governments will get more control over their Internet users and what information they can access. The outcome of such move could be what many experts call a balkanization of the Internet.

The opposing argument comes from Vinton Cerf. He believes that moving toward a more multi-stakeholder model of governance creates an opportunity to preserve its security, stability, and openness. The Internet, however, has reached the point where it can be described as the living organism where everyone can access, produce, and change the content and any new establishment of Internet control must not suppress the free and open nature of the Internet.

The Internet has been one of the greatest tools for freedom since the printing press. The free flow of information and ability to share ideas of the Internet have had many nations develop. Some dictatorship might not have fallen had the social media tools such as Twitter and Facebook not existed.

Take the Arab Spring for instance. How fast the ideas and thoughts of democracy spread all over the social media and how social media was used to organize and facilitate the political protest. Internet censorship

comes in many forms. The government can filter and block certain website to block the dissemination of political opinion, blacklist pornography, or pirate websites. However, the number of governments that block access to information related to politics, human rights, and social issues is increasing.

From the report of Freedom of the Internet 2013, it shows that out of 60 countries [examined], 29 of them have used blocking to suppress certain types of political and social content. Research shows that more users are being arrested, persecuted, or put in prison for the post on social networks or blogs and websites. Countries like China, Iran, and Saudi Arabia have implemented the most comprehensive blocking and filtering technology and now disable access to thousands of websites. Even democratic countries such as South Korea and India have blocked numbers of websites of political nature.

The Freedom of Internet 2013 report claims that some governments may prefer to institute strict punishment for people who post offending content rather than just actually blocking them, as this allows official to maintain the appearance of a free and open Internet while imposing as strong incentive for users to practice self-censorship.

As a member of U.S. Congress claims, giving up control of ICANN will allow countries like China and Russia that don't place the same value in freedom of speech to better define how the Internet looks and operates.

Since the early 1990s policymakers and rights advocates have worried that benefits derived through information and communication

technologies are unequally distributed. Clearly, digital divide is still an important topic in 2014 as in early 1990s. Jan van Dijk identifies three inequalities with respect to the digital divide.

The first two are occurring within and among developing countries and the third inequalities between developing countries and the advanced economies. My study, however, focused on the gap between the developing and the advanced nations as well as the increasing gender gap facilitated by the digital inequality.

According to International Telecommunication Unit Analyst Vanessa Gray, the scale of a country's digital divide reflects the condition of its economy. The challenge of building an information society requires political attention, which again requires that the country had the economy to do so. The digital divide may therefore be higher in developing world where 200 million more men have access to the Internet than women. The digital divide in the developing world not only concerns economic and social differences, but also Internet gender gap.

For example, in developing countries, the concept of cyberspace cafes have been more popular among men than with women due to the fact that men have more freedom and ability to spend money on it than women. As a report done by the Broadband Commission showed in the sub-Saharan African countries, only half the numbers of women are connected to the Internet than men. In the same report, it is estimated that 60 million females went online in India compared to 80 million male Internet users in 2013.

Access to the Internet is therefore an important tool to overcome the barriers of illiteracy, poverty, and discrimination. By becoming more technologically skilled can help women improve the education, income, and their role in the society. Knowledge on how to use technology efficiently and safely will help empower women in the developing world.

To conclude, the ongoing discussion on a possible Internet fragmentation will lead to breakdown of the Internet freedom, especially in the authoritarian regimes. Different nations and companies will get a tighter control on how and how much information people that get access to. Therefore, the main loser will be the end users of the Internet as nation will step up their level of censorship and punishment against freedom of expression.

The developing world, however, will struggle even more to catch up with the advanced countries which more likely will find a way around Internet fragmentation. Furthermore, the digital gap will increase where women will be the biggest losers of Internet fragmentation. It would be harder for them to improve their income and education as well as it will be harder for them to overcome the barriers of discrimination against women. With the Internet becoming more accessible to new users predominantly from the developing world, their interest needs to be taken into account with respect to the Internet governance.

DR. AARON C. VAN KLYTON: Okay. Do we have a question in between or just at the end?

NORA ABUSITTA:	I'll think we'll have the questions at the very end.

DR. AARON C. VAN KLYTON:	The next presenter is Agnes Kovatsova who will discuss her findings on the impact of fragmentation on global trading. She does this through simulation techniques using specially designed software to examine relationships between trading blocs. One of the techniques block modeling is probably unknown to many of you and, quite frankly, is experimental in nature. However, its parent methodology, social networks analysis is widely used in the business research to explore relationships among people and/or the companies within a network. Agnes, will you tell us more about your study?

AGNES KOVATSOVA:	Thank you, Dr. Aaron. As Dr. Aaron introduced, my research study has developed a new method of analysis of trade [inaudible] among countries with the help of using social network analysis and block modeling analysis to predict scenarios regarding global offline trade after a possible fragmentation.

The Boston Consulting Group report from 2014, and I quote, "History offers some lessons and some answers. In many ways, the development of the online economy mirrors the development of the offline economy. Trade on the Internet mirrors the development of trade in the physical world."

For this reason, offline trade data has been used a proxy for the study as this data is more readily available and complete than online trade data

at the moment. My analysis can be seen as pilot study or exercise acting as a starting point for this type of research, which includes secondary data collection and working with trade data.

The academic research shows that Internet has a positive impact on international trade. According Joshua Meltzer from 2014, the Internet has a direct impact on economic growth and international trade. The Internet can improve productivity growth, efficiency of business processes like communication suppliers with local and international customers at much lower costs or cloud computing which helps to reduce IT infrastructure costs and improve supply chain management or the basis of innovation where the Internet created more efficient and cost effective ways to deliver goods and services at the customers like through transportation management system and track and trace the movement of goods. Second slide, thank you. The global offline trade network.

There are, as you can see, 195 blue dots which are in social network language notes in the network each representing countries from the World Bank database. And the black lines represent the trading link between countries. However, as you can see, the analysis becomes rather difficult because of the complexity of the network. There I implemented another strategy through block modeling analysis.

Using this technique, countries have been grouped together based on three sets of characteristics which in block modeling language known as partition vectors. These are geographical location, trade organizations, and language. Once I rerun the simulation, the results become more usable.

Looking at the first vector geographical location, the resulting map is shown. Here the arrows represent the trade between each block. The orange colored ones, the trade going into only one way and the red arrows represent bilateral trade. Here, U.S.A. and Canada and the Eastern Asian blocks are the most essential players in the network having trade relations with every other block in the network and their links will not change after a possible fragmentation.

The second vector is trade organizations. Their countries have been grouped together according to their membership of different international trading organizations. For instance, the EU or the NAFTA. Similarly to the previous map, U.S.A. and Canada at the bottom and another group with five countries – Chile, Indonesia, Philippines, Thailand, and China – are the most essential players in the network and which would be the least vulnerable should fragmentation occur.

The third and last partition vector is language. The countries have been grouped according to the ten most widely spoken languages in the world, plus an 11th group which includes the other languages spoken in the world. The orange arrow again represents trade going into one way, and the dark blue colored arrows represent bilateral trade.

There are four main players in this map as you can see. English, Hindi, Chinese, and Japanese are the most central languages in the network having trade links with every other language. Also an increased trade can be seen with Russian-speaking countries. The finding show that more countries will trade with the North Asia after a possible fragmentation based on language.

The findings show that offline trade network would not be affected negatively. However, there are some limitations. This pilot study can be further developed and improved if online trade data becomes available because offline trade data have been used as a proxy for this study. If online trade data will be used, the analysis can be done again with the newly acquired information since offline trade data acted as a proxy.

However, this provides an interesting insight into the relationship that these countries maintain with each other, particularly with respect to language. It also highlights the fact the importance of the International Trade Organizations and how fragmentation affects their global positionality.

DR. AARON C. VAN KLYTON: Ertina Dyrma is our next presenter. She was very skillful in interviewing state representatives from eight key players in the current Internet governance debate. Of considerable interest in her research is the disparity between the words and actions when it comes to country's preparedness for fragmented Internet. She will now present her findings and discuss the responses to the interviews and the implications of them for the future of Internet governance.

ERTINA DYRMA: Thank you, Dr. Aaron, and hello, everybody. Welcome. As my colleague previously mentioned, there are ongoing discussions regarding the change of multi-stakeholder model among recognized key players of Internet governance including Brazil and China.

Brazil considers a multi-stakeholder model as the best form of Internet governance. They claim that Internet should serve as a tool for development and that the issues of concern to developing countries such as infrastructure and capacity building should occupy the center of international debate.

The data derived for this part of the project was from interviews from senior officers of ICT and trade ministries and departments in eight governments including here developed, developing and emerging economies.

At first we're made to contact the U.S., Russia, and China but unsuccessfully. There are two parts being emphasized in this part of the project: the country's preparedness for fragmented Internet and its influence in global trade. Responses collected were from the key players of the industry and also secondary players to reach the general view of the issue.

U.K. representative noted, and I quote: "The strategy of a business is something like an airplane. If it does not move forward, then it will fall off of the sky, and it comes even more true with the evolution of the Internet."

This shows the extent to which developed countries prioritize Internet as the key tool of trade development, which has the globalization process of opening up the market for anybody to trade anywhere. The importance of Internet as a catalyst towards globalization is noticed and supported by all the countries being interviewed. However, Turkey

argues that the main concern associated with the Internet evolution is cyber security, particularly in conducting global business.

Therefore, this report Internet fragmentation to a certain degree while Albania and Kenya are using Internet for transparency purposes, they argued that a fragmented Internet would lead to their being constrained from reaching other countries and businesses information. On one hand, countries such as Turkey and India claim that they are prepared for fragmented Internet and support the idea that countries have to provide cyber security for themselves, their citizens, and their companies. But for sure, the fragmentation has to enable smooth online trading.

On the other end, Sweden argues that there are so many different aspects of the fragmentation in different ways that it is difficult to determine the Internet fragmentation effects yet. Furthermore, despite the fact that countries did not disclose information during the interview of whatever actions they may be taking, they claimed that each country will do well to prepare for the worst.

In this study, the developing countries further they would face increased challenges in creating and maintaining their trading image. They would also face additional barriers which should lead to increased bureaucracy among trading partners, leading to a higher cost. This provides additional support to maintaining the current multi-stakeholder approach.

A different story emerges with regard to global trade. Different views were expressed that seem to be linked to the country level of

development. For example, developed countries such as the U.K. are more concerned with the side-effects that a fragmented Internet would bring including difficulties to access information, to share it, to have the globalization, and you get to come back to much more fragmented market so leads in more bureaucracy and slowing everything down.

Interestingly, Kenya pointed out the fragmentation in many ways would help to preserve the cultural fabric of the country. Emerging economies responded that the multiple Internet might create boundaries between nations which will hinder the online trade. Though a few countries believe it as a major concern, but Internet fragmentation might hinder the online trade drastically. However, Turkey says that as time passes and as long as resolutions are produced, the trading would recover from the effects of fragmentation.

The Swedish representative said the following: "Trade is not very sentimental about politics sometimes. The businesses will want to maintain trade. A recent illustration of this is the relationship with Russia and Germany. It should have been affected by the actions of Russia and [Korea]. However, due to economic reasons, the trading link I've seen no change.

In this study, different issues of Internet fragmentation were raised through the data collection with the representatives, providing a closer insight of the issue in country level that may be available through written literature already. Considering this, it can be said that the Internet will remain untouched and following its current governance structure.

Different developing level countries support different views. The developed ones are positive that Internet fragmentation will not affect any global trading link. The developing economies argue against [inaudible] that the strong countries will not face any problem due to the fact that they have already created their trading image and are strong enough to overcome any issue of this scale. Most of these key players do not foresee a change in Internet governance.

Furthermore, the inactivity of the countries, signals a de facto approval of the current multi-stakeholder model drawing one key conclusion. Internet fragmentation will probably not take place and that a multi-stakeholder governance approach is the best practice. Thank you.

DR. AARON C. VAN KLYTON: We now turn to the last part of our panel. This is going to be given by Lakmal. He examines companies that operate internationally and the impact that a fragment of Internet would have on their business. Recently as Nora pointed out, a study was conducted by Boston Consulting Group that assessed the extent to which businesses, customers, and others could be inhibited from participating in the global Internet economy. They developed an index called the e-Friction Index that categorize 65 countries according to five levels of e-Friction or vulnerability.

Lakmal's project built on this index to develop a more nuance understanding of the vulnerabilities that could occur due to Internet fragmentation. He does this by looking at the relationships between

parent companies and their subsidiaries. He'll share his research with us now.

LAKMAL LIYANAGE: Thank you, Dr. Aaron, and good afternoon, everybody. I'm trying to identify how companies operating internationally would be affected in the case of fragmentation. So in order to do this, I have selected companies listed in the FTSE 100 index by default, the large organizations where operations would be disputed across various locations.

Let me quickly explain how I approached this question. Parent subsidiary data was downloaded from the August database for the FTSE 100 companies. They were then organized based on turnover and categorized based on operating structure, also known as typology. I'll explain a bit more in further.

Five companies were selected from each typology and I looked at the following. I looked at the typology itself, the industries where they operate, and the characteristics of subsidiaries such as location of the subsidiaries and the industries that the subsidiary is operating.

Finally, by using a weighted average for location and industries, a risk factor was calculated. My part is different from the previous discussions that were made because my colleagues discussed the effects on fragmentation on countries or the discourse as the unit of analysis. With this part, however, the businesses became the [inaudible] analysis in understanding how they might be affected.

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International business will operate in different countries for various reasons such as gaining competitive advantage in the value chain or expansion due to growth. Whatever the case, for those companies to be effective and efficient, it's important that communication and transactions are not hindered at any point throughout the network of the company. This may be within borders or across borders.

Let me explain the organization's structures or typologies which I mentioned earlier. This comprehensive analysis that you can see was carried by two individuals named Bartlett and Ghoshal in 1989 where they argued that companies operating internationally will fall into one of the following categories: international, global, multinational, or transnational. From these four types, the transnational companies are extremely decentralized in nature and the subsidiaries remain more independent and less reliant on the parent company to make corporate decisions.

Multinationals, on the other hand, are also decentralized but they rely on the central office to make strategic decisions. Based on the characteristics of these typologies, it's safe to theoretically argue that multinational companies would be the most affected in the case of fragmentation due to its decentralized in nature as well as the reliance on corporate headquarters. This was also something that I looked at.

So the e-Friction Index. The e-Friction Index has been mentioned before a couple of times. It's the guide that I have used in order to identify the risk associated with location of the subsidiaries. This index created by the Boston Consulting Group early this year where they analyzed 65 countries to understand different types of friction that prevents

countries, companies, and consumers from realizing the Internet's full benefits. With the final result, they grouped countries into five categories based on the e-Friction level.

These categorizations have been incorporated into the study to enable me to identify the risk based on the location of the subsidiaries. However, the question still remains as to how effective this index alone is as we're seeing how companies would be affected.

Let's look at Vodafone's location-based risk.

I'm looking at the example from one of the pre-mentioned typologies. I'm looking at the global companies which I mentioned before out of the four. You can see that Vodafone is on the top of the list of the companies that are here. They've got the highest overall risk value of 11.44. It also has the highest value for location weighted average.

The fourth column on the slide is the industry weighted average. It's calculated by using various industries that the company subsidiary is operating. By considering industry operations in its preliminary stages of production, I have assigned a score between one to five for each individual industry. I'm considering ten industries, which I'm arranging from zero to nine. Overall, these values are calculated based on the weighted average of location industry and then the risk associated with the industry of the parent company. As it can be seen of industries such as communication and finance have a higher risk factor than [inaudible].

Let's look at Vodafone's location-based risk. This one reveals that 77% of Vodafone's subsidiaries are located in countries associated with a low or lower medium e-Friction value. That is the 66% and 11% in the wheel.

The remaining 23% is within medium to high risk locations. Therefore, in terms of location alone, you might think that Vodafone can be seen as a company that will be minimally affected by fragmentation. However, location is only one aspect of the company's strategy.

Looking at the next slide, we will see a different story altogether. In here, Vodafone has been analyzed based on the industry classification in conjunction with their location. So each ring in the wheel represents an industry where Vodafone is engaged in. For example, the innermost ring is tied to industry number three on the table which is manufacturing.

The full explanation of these industry classifications can be found in the report. The industry classifications, like I mentioned before, range from zero to nine. And in the case of Vodafone, their operating industry is zero, one, or two. The top row of numbers represent industries on the table.

In the case of Vodafone, majority of Vodafone's subsidiaries are within industry classifications four which is communications. In other words, 114 out of 244 or 46% of subsidiaries operate in communications.

The next significant portion of subsidiaries of Vodafone are within industry seven and eight. On the table we can see it as 53 and 58 companies in total. Seven and eight represent industries, namely finance and insurance and services. All three of these industries which are communication, services, and finance and insurance are most likely to be affected if fragmentation was to occur due to the nature of the industries.

If we [relocation] into this, of the three previously mentioned industries, the majority of subsidiaries that engage with communication, finance, and services are located in countries associated with the low e-Friction value. Level one on the table.

In essence though, 225 subsidiaries or 92% of Vodafone's 244 subsidiaries are operational in industries that are at risk if fragmentation was to occur. So you can see by looking at location alone, it showed that Vodafone will not be affected as much. But by incorporating the industries that the subsidiaries operate in and the company operates in, we can see a better picture. Next slide, please.

My colleagues and I took different approaches to creating the body of research. In the beginning of my presentation, I made a theoretical argument that multinational companies would be the most affected in the case of a fragmented Internet. But after conducting this preliminary study, the relationship within the structure of companies and how they get affected was indeterminate mainly due to the complicated nature of networks that these large companies operate in. Essentially, companies operating in a structure similar to the web – just like the Internet itself.

However, it is safe to say that regardless of company structure, all companies operating internationally will be definitely affected. Also, during the preliminary stages of this process, I conducted pilot interviews in the public and private sector to shape the scope of the study. The main concerns expressed by them were related to the data security, replication of software and hardware, and communication and data security across multiple locations.

Countries that were interviewed by Ertina showed a lack of action towards supporting a fragmented Internet, which in turn supports the existing multi-stakeholder approach of the governance of the Internet. One of the reasons why countries are not positive against the fragmented Internet was because they believe that online trade would be highly affected based on the level of economic development of the country.

The Boston Consulting Group said that the Internet mirrors the development of trade in the physical world. And Agnes's simulation showed that the trading patterns of the main blocks will not be affected in the case of fragmentation. Example, U.S. and Canada, Eastern Asia and the EU will remain the same and they would not be affected. North Asia, however, would be positively affected in a fragmented Internet.

Lastly, if fragmentation occurs, Janthira showed that the main losers would be the end users of the Internet mainly due to concerns on freedom of expression. And in the developing world, they would be the ones who would be most affected as the developing world will have to try to catch up to the developed world without sufficient resources.

There is a large proportion of users still with no access to the Internet. So the future of the multi-stakeholder model will need to incorporate most stakeholders particularly from developing countries and cater to their needs as well. Thank you for listening.

DR. AARON C. VAN KLYTON: Okay, well we can open the floor up for questions from both in-house and hopefully through remote access. Let's see what comes through. Any questions please for the panel? Yes?

[WAREG VILLAMODONGO]: My name is [Wareg Villamodongo]. I'm from Botswana. I have two questions that I really like to post back to the podium over there. The first question that I have regards to Internet fragmentation has this – regards to the presentation. Did you consider the sluggish penetrations of the Internet with regards to the cost of connectivity for developing countries?

JANTHIRA ENGESET: Thank you for that. No, because we actually just look at from a political and social perspective from stakeholders who are interested in this topic. My data was collected from speeches, hearings, and Internet forums. And the cost of the developing world connecting to Internet was not mentioned in any of the data I found.

LAKMAL LIYANAGE: In addition to that, when the BCG report was created, they incorporated that as one of the frictions that people would face in terms of infrastructure. That was incorporated in the fourth part for businesses but not necessarily in the socio-political aspect of it.

[WAREG VILLAMODONGO]: Okay. But does that have to do with the civic society itself? Because I want to believe that different governments develop the Internet

policies of which I believe they have an impact to the civic society and the multi-stakeholders. Then what is the relationship between the civic society and the multi-stakeholders that you have made that are – the interviews to.

ERTINA DYRMA: Sorry. If I understood the question right – so you want to make the link between the civil society and the policymaking in the governmental board?

[WAREG VILLAMODONGO]:   Exactly.

ERTINA DYRMA: Yeah. Okay, so the scope of the study was a general one including the fact that what the country's views were on Internet fragmentation and how they actually see and if they are taking any actions regarding to it.

And the civil society part, I mean we didn't look in depth to it because it wasn't the scope of the study. However, it is mentioned most of the studies especially the developing worlds, mostly the developed ones because they don't face that issue as much as developing ones, that's the main priority. The fact that they have to build the policies of Internet based on the civil society needs and necessities regarding to development of social aspects of the country. I don't know if that answers your questions.

[WAREG VILLAMODONGO]:   Yeah. That's better. Thanks.

ERTINA DYRMA: Thank you.

DR. AARON C. VAN KLYTON: Great. We'll move on to any other questions. Yeah, please.

[PAUL MUSHENE]:   I'm an ICANN fellow from Kenya. And I just wanted to comment on maybe something that you maybe didn't look but I think is important is, did you have time to look at the alternative root DNS? For example, if instead of going through ICANN's root and trying to actually resolve and get the resources I want online, I use other maybe alternative root systems and how this one's going to actually impact because technically, they fragment the unified root.

A good example of this is the Tor. It is onion protocol and you may find that if you go to Tor, you can be able to access sites that are not actually you consider legitimately under the ICANN root and these are the dot onion sites. And of course, we've already seen what some actually have legitimate uses like hiding decadence from persecution and others are also used to sell drugs and other things. So maybe I just wanted to hear your perspective. Did you actually look in this? Because it's a very interesting issue.

ERTINA DYRMA: When you mentioned DNS fragmentation, actually that's one we focused on. So if you say that we should have looked on different aspect of the DNS like getting access to the information or even through ICANN, actually our study focuses on the fact that should we fragment these DNS or not? Should DNS be fragmented in the sense that if we're looking at a different root, it means that we're looking at Internet fragmentation like having a different root means DNS fragmentation.

So this study is showing that general overview of it is that whether this DNS fragmentation would be a positive or a negative approach of the future of the Internet. So what we found out is that DNS fragmentation would lead to a lot of consequences including social ones and economical ones as well. I don't know if that helps. So we weren't actually into DNS different root success.

LAKMAL LIYANAGE: Also, we didn't look at Tor or [inaudible] as everybody else knows it too much. But it does help with things like the growth of [Bitcoin] users wanted to remain anonymous. Those kinds of things are impacting how the future of the Internet evolves. However, we didn't go into that much detail into looking at how these alternate roots – what the costs are, and how will it impact the governments of countries. We didn't.

DR. AARON C. VAN KLYTON: Are there other questions, please? Yes, again.

[WAREG VILLAMODONGO]: With regards to your research, I think it was just too narrow such that you are focusing on certain very critical aspects and leaving some of the important aspects of which I think that could've added much value to the research. I mean, I see your study being one of the diverse and open studies and I really wish you could expand it to cover lots of areas.

DR. AARON C. VAN KLYTON: Just to respond to that, and then we'll come to you, this initiative is called the client-based dissertation which the University of Greenwich Business School have started and many other business schools use it also. And so it's very much tailored to the client's needs and the client was ICANN in this case. So there was a very specific mandate that came through from the client that they wanted us to investigate.

Now, from the initial conversation that we had with Nora and Nigel who's gone, the project did evolve as information became clearer and so on and so forth, and I think both the points that were mentioned just now and the alternative means that you mentioned will contribute to broadening the research down the road and I'm sure that some of this will be picked up.

UNIDENTIFIED MALE: You took the word out of my mouth. Above all, I want to appreciate the fact that you did a good job at presenting to us. For the novice and all, you would've educated us one way or the other. So I want to say thank you for that. And no question.

DR. AARON C. VAN KLYTON: Are there any other questions? Yeah, go ahead.

UNIDENTIFIED FEMALE: Hi, you know me. I'm [inaudible]. I'm from Singapore. We've heard a lot especially this morning at the intergovernmental meeting about intergovernmental governance. I don't know if your research looked at all into what forum or what group is best for enforcing Internet governance because you can have multi-stakeholders but somebody has to do the work in the end to implement the proposals. So did you look at that at all?

DR. AARON C. VAN KLYTON: Do we need clarification? Can you just repeat the actual question? Sorry.

UNIDENTIFIED FEMALE: My question is: does your research also manage to look into which forum or which multinational group or organization would be the most appropriate or in the best position to implement any proposals that come out from the multi-stakeholder forums?

ERTINA DYRMA: Okay, I'll answer that question. As Dr. Aaron said, the limitation of the study was actually really, really limited considering the broad subject and it's an ongoing discussion no doubt of this topic. So it's not that we are not [inaudible] about it but when it comes to governance of the Internet, we can say for sure that what we found out through the research that we've done is that the best approach in [proxies] is that

the governance of Internet should go through, as you said, an inter-governance in the fact that different countries should have the same level of decision power so that power would lead to a collaborative decision in the end to take the right approach of policymaking for future Internet management.

I don't know if that answered that question, but…

UNIDENTIFIED FEMALE: Not quite, but we can take it offline.

ERTINA DYRMA: Okay.

DR. AARON C. VAN KLYTON: All right, any other questions? Yes, please.

UNIDENTIFIED MALE: Hello, [inaudible]. For the last speaker, I find this very interesting. You mentioned that the structure, the industry or the location of an international business was being affected by the fragmentation in difference regards.

And also for the first few [speakers], you also mentioned about economic links between different economic blocks. So do you see any correlation between the first part and the second part of the research which is like – because some of the business chose not to start their subsidiaries in certain location and this is one of the reasons making some of the trade links less effective after this fragmentation happens.

LAKMAL LIYANAGE: That's definitely a very good question. From what I looked at I looked at companies listed in the U.K. and it was quite limited in terms of where the – I mean, it was in various locations but I didn't – because it's U.K.-based companies and primarily more of the subsidiaries remain in countries that were low e-Friction or with a lot more infrastructure or with a lot more support in terms of the Internet.

I think there will be a link between the economic development because a large part of online trade would also be related to subsidiaries and the parent companies, transferring of money and all of that but we didn't look into that detail or the correlation of it.

DR. AARON C. VAN KLYTON: I think another point that I think you're mentioning is that there is some – because of the selection is already made before the supposed fragmentation would occur that would already put certain types of companies on a different trajectory because of the location choices that they made due to whatever risk assessments they did in the beginning, correct? Something like that, yeah.

So I think there is some scope for correlation between Agnes's part in looking at how the new structure of global trade would occur and how that would affect the sort of the companies, the FTSE 100 companies that Lakmal looked at, but then that's further down the road.

Yeah. I'm sorry. Any other questions? Until what time are we okay for time? Okay. Are there any questions online? Okay. I don't know if that's good or bad. Yes, go ahead.

[MARTIN]:   My name is [Martin]. I'm from Argentina and usually Internet fragmentation is usually discussed under the [neutrality] scope. My question is: do you believe that the fragmentation is going to decentralize commerce, is going to prevent a competition issues? Or is going to allow the monopolies or the more dominant part to extend their power? Is this clear?

JANTHIRA ENGESET: One point which I would say to answer your question is that if fragmentation would occur in the future, obviously it would make the Internet a decentralized system. Obviously that would give face for monopoly and other types of competition obviously inside the trading blocs which I identified even though it can be geographical location or trade organizations. I mean, it would definitely affect competition in terms of in better increasing or decreasing competition inside their [own] bloc. It might increase national business and how they grow or international.

For example, take the EU, the European Union. I mean, countries in that bloc, they will definitely trade with each other inside the bloc even though if fragmentation would occur, they would not trade with blocs outside of the EU. So I'm sure even it would make at the beginning some monopoly issues, but after a time I'm sure they would solve the problem inside the bloc.

DR. AARON C. VAN KLYTON: Also Laura DeNardis who's an American academic wrote about one of the four – identified four types of blocs that the government would be able to do and one of them was this very one that you're alluding to that mentioned that you then cut off international companies – foreign companies – from competing in new markets and with a fragmented Internet you'd be much more effective at doing that – the state would be. Whether that's good or bad, of course we know that that's an inefficient result because that led to import substitution back in the 1920s and so on particularly in the colonial countries. But yes, I think that's a very good point.

I think there was another hand over here. Yes.

[JEROME]: Hi, [Jerome] from Brazil. It's more like a provocation than a question but – so of course we're in an ICANN meeting, and sometimes global Internet looks like a dogma and so my provocation would be, is there anything good about fragmentation? Is there anything positive about balkanization?

ERTINA DYRMA: Hello. We've been quite negative, let's say, from our research with all these negative aspects of Internet fragmentation. However, there are some good positive sides of it. Obviously everything's got bad and good sides of aspects. And when it comes to Internet fragmentation, even though not a lot of countries supported it especially on my research, in the beginning it may preserve the cultural aspects of it as I mentioned especially for developing worlds wherein they don't probably have their

right sources to protect their own culture and it gets usually internationalized by other cultures as well.

And then another aspect is the local or national economy – not economy, but trading business – doing business because the small companies, the small businesses would increase as there would be more opportunity for them to operate within the country rather than selling the goods in cheaper prices to bigger corporations here.

However, these are only, let's say, a short-term positive aspects of fragmentation because if you see through them in longer aspect of it and long future aspect, obviously that local business that will grow in five years, let's say, will be good like booming of the country will slowly go down because not all the countries have the potential to have the economy growth based on the national products and services.

And the Internet fragmentation would lead to lots of barriers especially during international business as we said, especially during between the blocs. So if you see that in the general view, in a long distance view, we'll say that the Internet fragmentation positive sides would be really minor.

DR. AARON C. VAN KLYTON: And also in my opening introduction, I mentioned that things like international cybercrime and securing data and these kinds of things would actually be much easier for countries if the states had control over the boarders, but again at what cost is the real question. So there are some kind of smaller benefits but they're certainly largely outweighed by the cons, so to speak. Yeah, go ahead.

LAKMAL LIYANAGE: I'll just add to that. Maybe one good example of fragmentation is Tor and having an onion site hides or gives anonymity so you can actually see fragmentation in a positive light if it's going to give anonymity, but at what cost?

Because one of the biggest problems with the fragmented Internet is that basically you'll be taking us back to the age of the phone line whereby if I needed to actually get abroad, I needed to pay maybe some carrier charges and that is one thing. So you'll not actually have a very, very good online experience. So you may have maybe a situation whereby if I wanted to go to Google, I'll incur a cost. I mean nobody wants that. You want to just go and Google straight away and get what you want.

So in the long term, I think it's negative most of the time but there's also some positive areas where fragmentation may also be necessary in order to actually protect maybe some kinds of dissent and where you don't want maybe perhaps a country that is sensory. That's how I look at it.

DR. AARON C. VAN KLYTON: Good. Time? Do we have time for a couple of more questions? Yes.

ADRIAN QUESADA RODRIGUEZ: Hello. My name is Adrian Quesda Rodriguez. I'm from Costa Rica. I really don't have a question. I just would like to commend you on the interdisciplinary approach of your investigation.

I've been investigating from the political and legal side of things for a long time and I've noticed that not having the ability to create my own software and to do some research based on the pure data has really limited my ability to do some extensive conclusions. So I'm really impressed by the approach that you have taken and I would like to really congratulate you.

[AKIMBO]: Just a contribution. My name is [Akimbo] [inaudible] from Nigeria. I want to agree a little and disagree a little with the conclusion. Considering the fact that we are here because of the next generation and in the next generation we won't thinking about the hiccups we're having now because we would have had a lot of research documents either in actions or history to compare. The political and social landscape, for example, would have also changed and so we're talking about a new approach to Internet fragmentation, that by the end of the day we'll be coming close to what we need to fragment, what we need not to fragment. I think that should be our take home. I hope you understand that.

ERTINA DYRMA: I wanted to add to that, actually, because you said that what we need to fragment and what we shouldn't. The fact is that how do you know what to fragment? That's the question because it's not – I mean there has been a lot of debates regarding that topic but the problem is that how do you know how to fragment and what should you fragment?

[AKIMBO]:
Okay, thank you very much. Now because the whole idea about writing document, doing presentation, from where I come from is called [inaudible] always an advantage and a disadvantage. Now you are the first set of people who have written this. Fortunately, you've done a good job and in two or three years we'll still be looking at it. But one thing is positively sure, we'll always get to a divide where we'll be able to say this is what we should fragment, this is what we shouldn't tamper with so that would come bridge the gap and not go back to the cold, old age. I hope you get that. Thank you.

DR. AARON C. VAN KLYTON:
Yeah. Good. Was there a hand on this corner here? Yes, go ahead.

[JASON HINES]:
Hi, [Jason Hines] from Barbados. In terms of the question as to what to fragment or not fragment, I thought – well I'm not advocating any fragmentation of the Internet but certainly in terms of the provision of services and content, there's a lot of stuff that countries could do well with having more local providers of. So for instance, instead of having a large developed country offering an e-mail service for everyone all over the world, it would be so great if there were very well-developed local e-mail service providers that were as efficient and reliable and full-featured, etc. and that could be used for local communication to stay essentially local within the country, and then there will less of a, say, security problem if it traverse boarders and people are able to say manipulate the case where it might be here now the provider based in a large developed country and compromises security of those people all over the world for instance. So there are opportunities and provision of

content and services where some of that could be more local and that would develop the Internet economy in the individual countries.

DR. AARON C. VAN KLYTON: Okay. Very good point. Any other comments from the group? Okay. Well, I think we can conclude our discussion today. I think it's been very useful and – oh sorry, go ahead, Jeff.

JEFF DUNN: It's okay. I want to thank everybody for coming. And just to quickly let you know that the slides as well as the report are going to be available on the London 50 website now that this has happened. I also wanted to quickly pass over to Lauren.

LAUREN ALLISON: Hi there. My name is Lauren Allison. I am the Development and Public Responsibility Program Manager here at ICANN so I'm a few steps behind from Nora, but she's just asked me to conclude and point out a few things.

I just wanted to thank you guys very, very much. That was a wonderful presentation. I don't know if you guys have published the report just yet, but I can tell you it's about 100 and how many pages long? It's 80 plus the appendix. So it's really, really fantastic work.

This is actually part of a bigger initiative we're doing called NextGen and we have a couple of NextGen people here. Can you raise your hand if you're a NextGen? So they wear all in purple shirts but I see they're slowly dropping. But we've actually got people asking for the purple

shirts now as well. And it all falls under development and public responsibility which we'll be exploring at a session on Wednesday, 1:00 in the Windsor Suite, so it'd be fantastic if you could come along. This has been a really great session.

I'm just going to sort of finish with handing over to Jeff. He's our online learning specialist. He runs all of our online learning platform and he has facilitated this event. So thank you very much, Jeff, and if you just want to close by saying just what NextGen is, how it started and what's next for NextGen?

JEFF DUNN: The audience is getting more than they bargained for. So NextGen is basically the just the 32nd version. A group of 18-30 year olds that ICANN is engaging with, in the particular region that the ICANN meeting is happening at. So all these members are from the United Kingdom and the surrounding region, and so obviously we'll be doing this again in Los Angeles, and so we'll be seeking members of that group from North America.

So if you see something about NextGen or you think that'd be a program that you're interested in, feel free to apply. But that's it. Are there any further questions?

No? Okay, great. Thank you all for coming.

[END OF TRANSCRIPTION]