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Responding to Impact Technologies

DIGITAL US – HOW THE INTERNET IS TRANSFORMING MODERN CULTURE

Panel Discussion

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In cooperation with TELE2 Russia

Moderator:

Liam Halligan, Chief Economist, Prosperity Capital Management; Columnist, The Telegraph

Panelists:

Steve Crossan, Head, Google Cultural Institute

Mats Granryd, President, Chief Executive Officer, Tele2

Susan Hazan, Curator, The Israel Museum

Vladimir Medinsky, Minister of Culture of the Russian Federation

Oleg Novikov, General Director, Eksmo

Manuel L. Quezon III, Undersecretary, Presidential Communications Development and Strategic Planning Office (PCDSPO)

Olof van Winden, General Director, Netherlands Media Arts Institute; General Director, TodaysArt

Mike Yao, Associate Professor in the Department of Media and Communication, City University of Hong Kong

Front row participants:

Vladimir Chopov, First Deputy General Director, TNT-TV

Igor Drozdov, Vice-President, Chief Legal Counsel, Skolkovo

Dmitry Konnov, Managing Director, Universal Music Russia

Sofya Trotsenko, Head, Center for Contemporary Art, WINZAVOD

L. Halligan:

Ladies and gentlemen, thank you for coming. It is late in the day and we have all perhaps been indulging in some excesses in what we have eaten and drunk. I have asked the panel before you to be as discursive as possible and I would encourage you to do the same. My name is Liam Halligan. I am a newspaper columnist for a paper you may have heard of, *The Telegraph*, in the UK, but I do not actually live in the UK. I live here. Most of the week I am an investor here in Russia through my asset management company, Prosperity Capital Management.

Now, access to information provided by the Internet is unparalleled and democratizing. The web, with suitably free or cheap access, is a very powerful force as we all know – for education, for wisdom, and for culture. Google, together with Tele2, has arranged this panel in recognition of that power of the Internet to share information, form opinions, catalyse action and to store information. Pretty much any individual now with basic literacy and basic equipment can influence the world way beyond the bounds of where they live and travel, and yet only an estimated 2 billion people are online, out of a global population that is, by most estimates, about 7 billion.

The Internet can catalyse innovation, learning and other cultural and political activities. So what does this ever-growing wealth of information at everyone's fingertips, to which everyone can add, mean for our culture, for science? What dilemmas does it pose? I am delighted to welcome the panel before you. I have learned a great deal just in the last 24 hours talking to the panel and hearing what they have to say. I will ask each member of the panel to take two minutes – and we will be strict – to introduce themselves and tell us where they come from, and then we will open it up to discussion. I encourage as much audience interaction as possible, so do catch my eye and I will give you the floor. Ladies and gentlemen, I would first like to introduce Steve Crossan who is the Head of the Google Cultural Institute. Steve, please go ahead.

S. Crossan:

Thank you very much, Liam, and thank you, everybody, for coming. Very briefly, we set up the Google Cultural Institute just over a year ago in Paris as an engineering group with the mission of bringing the best that technology has to offer to services and the cultural sector. Since then we have spent the last year running a number of pilot projects effectively, most notably the Google Art Project, a partnership between 155 museums (and counting) around the world, aimed at bringing material online at high resolution, giving a virtual visit to users and, most importantly, giving a lot of contextual and educational material around the artworks from those museums. Amongst our partners we have the Israel Museum of Jerusalem, represented here by Susan. Also, the Hermitage Museum here in St. Petersburg was one of our first partners, and we are now lucky enough to have five partners in Russia on that project.

From those projects we have learned a great deal. The most important thing that we have learned is that what is crucial is bringing the expertise of the curators, the historians, the critics and the writers from the cultural sector into the picture. It is no use just putting the material online – it must be put online in context and with explanation. We see our mission now very much as building tools for that sector and allowing that community to create, without strong technical knowledge or departments, very compelling virtual exhibitions of material which can reach a global audience. That is the work that we are engaged in.

L. Halligan:

Thank you, Steve. Next to Steve is Mats Granryd who is the President and CEO of Tele2. Mats, please go ahead.

M. Granryd:

Thank you, Liam. It is a great honour to be here and I feel like the odd one out among a lot of notable cultural figures. I am representing Tele2, which is a mobile operator company. We are present in Northern, Central and Eastern Europe in 11 countries, and we are investing in Russia heavily. We have been here for the past

10 years and we intend to continue to be here. I think I have everything to do with culture and yet nothing, and I will be happy to explain what I mean by that later on.

L. Halligan:

Thank you, Mats. Next to Mats is Dr. Susan Hazan from the Israel Museum, where she is the curator. Susan, please go ahead.

S. Hazan:

I am very happy to be here. Thank you for the invitation. We have a nice agenda of digitalization of our museum because it is one of the largest encyclopaedic museums of the world. We have 500,000 objects and we try to get as much as possible online, to share our collection over the Internet. In recent months we have partnered with, as Steve mentioned, the Google office and have produced two amazing projects. The first is the Google Art Project, where we are one of the 155 museums, which is very nice for us. Perhaps more interesting was a project on the Dead Sea Scrolls. This is the most important patrimony of the State of Israel. We have put five Dead Sea Scrolls online in very high resolution, including the entire manuscript of Isaiah, which is very important to everyone around the world.

We had no idea how well this would succeed before we launched. We had hoped it would become popular. Within the first four days we received over 1 million unique visits to the site. We are very pleased with this project. In terms of the ideas of what happens with the museum when we go online, people are always asking me, "If you put your material online, will they come to the museum?" Well, this is an old argument and we have resolved it. We believe in marketing our museum through the Internet, sharing our educational resources over the Internet and putting very high resources, in this case with Google, for everyone to use around the world.

L. Halligan:

Fascinating. Thank you very much. Next to Susan is Oleg Novikov, the General Director of Eksmo. Eksmo is, of course, one of the biggest Russian language publishers in the world. Oleg, please go ahead.

O. Novikov:

As we are in St. Petersburg, I would like to speak in Russian. I represent the publishing industry, which for many years was seen as a part of the media industry, but a relatively old-style part. The book, as a product created in the Middle Ages, has barely changed since those days. We had already resigned ourselves to that. However, in the last four years, the book has moved to the cutting edge of technical progress. Leading international high-tech companies such as Apple and Google want to distribute book products. This is good news, because it means that the Internet can serve reading and make books more accessible. Publishers such as ourselves have discovered new opportunities for delivering books to readers and informing them about new titles, especially in Russia, where the old problem of bookshops has lately become more acute. These opportunities are a serious challenge and we would love to make use of them.

L. Halligan:

To my right, and to your left, ladies and gentlemen, we are very pleased to have with us Manuel Quezon who is the Deputy Minister of Communications – well on his way to becoming the full Minister, I am sure – in the Philippines. I have been absolutely fascinated to learn recently of the extent to which the Philippines is using the Internet to better govern their country. Manuel, please go ahead.

M. Quezon:

Thank you. Because of the limited time, I would like to address the challenge that we are facing in the Philippines, which is low trust. It is a low trust environment, where people are not fully aware of the full scope of laws, therefore you cannot truly build the rule of law. People are very unaware of the basis of policy decisions and

much more so of what goes into those decisions. Our programme involves basically putting over a century of legislation and laws onto the Internet, which brings up two problems. Firstly, it turns out that nobody had a full list of what these are, much less where to find them. The second is that in trying to put something online you are harming the more tedious process of cataloguing everything that already exists.

I have addressed this with one basic insight, which is that institutional memory is a competitive advantage at a time of great change. I mean that in a different sense from how knowledge has traditionally been used by governments, which is as a competitive advantage for its officials. Instead, what we have taken is an approach that says everyone has something to gain from partaking in this institutional knowledge.

How do you promote this and make it accessible? The first way is to be responsive to your markets. The markets are ruthless but clear in what they want. For example, the public is most interested in holidays or weather reports, so you give it to them faster and more accurately than anyone in the media can, therefore it builds media dependence or cooperation, and at the same time takes care of dissemination and getting people to know what to do. The second regards policy, the problem of every government, and how to justify it. Your ability to provide briefers to the media, which itself has very limited time with inexorable deadlines to try to understand or get hold of an issue or debate, can be successfully managed, in our view, by providing the information, perhaps in innovative forms like video or infographics and that sort of thing.

The final point is that this requires restoring trust and best practices. This is where open source comes in. There have been too many cases in developing countries of IT being used to make money for officials but not for public service. It is important to make sure there are credible partners. For example, we have used some of Google's technology, which has become very cost effective and at the same time helps bring your message to the public.

L. Halligan:

Thank you, Deputy Minister. Next in line is Olof van Winden from the Netherlands, where he is the General Director of the Netherlands Media Arts Institute. Olof, please go ahead.

O. van Winden:

For me, the Internet is pretty interesting on a professional level. The Netherlands Media Arts Institute runs a large collection of media and time-based art and we do our distribution based on the Internet. On a personal level, I think there is something more going on. In 1969, the first two computers were connected. In 1971, the first email was sent. In 1989, the Internet was invented by Tim Berners-Lee. That was 23 years ago, which is pretty recent. Now we have the Internet in our pockets. This large company called Google is trying to organize the information and make it accessible, but is also famous for its much quoted "Do not be evil", for example. For half of my life I had a computer, and now there is a whole generation born with a computer, who knows how to operate an iPad before they can read a book. Then there is the whole topic of freedom of information. Governments are afraid of Julian Assange, who is a friendly guy, I think. It is time for some reflections. The art world, the creative industry where I work, has some insight into that.

L. Halligan:

Thank you very much, Olof. Next we have Mike Yao, who comes to us all the way from City University of Hong Kong. This is his first time in Russia.

M. Yao:

Thank you, Liam. I glad to be here. It is a rare opportunity for someone who is used to hiding in the ivory tower to come out and interact with the real world. I am relatively young, but I have spent much of my research and academic life thinking about questions like how media technologies impact on our lives, our behaviour, our society. More specifically, I have done a lot of research on people's behaviour in a virtual environment: how they interact with technologies and how they protect

themselves from privacy violations; how certain types of behaviour transfer into this virtual environment but others do not, and how our personalities affect the way we act in this environment.

I categorize myself as a media psychologist, but at the same time, on a personal level, I represent the newer generation of media and social scientists that grew up with this type of technology. I played video games all my life, I am an avid Internet user and keep up with the coolest stuff out there. Our research forced us to think about this from the sidelines and how this technology changes us as a society – politically, economically and behaviourally. At the same time, as a user myself I am fascinated by new developments and thinking about philosophical questions about how culture, media, and humans interact with each other.

L. Halligan:

Thank you, Mike. Next we have Igor Drozdov. Skolkovo is, in many ways, one of the pinups of Russia's future and potential power in the area of IT. Igor is one of the Vice Presidents and Chief Legal Counsel of Skolkovo. Igor, please go ahead.

I. Drozdov:

I also would like to speak in Russian while in Russia. I represent Skolkovo, the centre for innovations, which is well known to Russian audience members. Obviously, we cannot imagine innovations without the Internet, which is an innovation unto itself. We appreciate the opportunities that it gives us, such as access to information and knowledge. And as was already said today, knowledge is an important competitive advantage that allows us to produce new knowledge and stimulate the innovative processes.

We can see several challenges in relation to the Internet and the huge amount of information available online. First is the problem of balance between the interests of society and interests of those who hold information. Access to information is often restricted by existing intellectual property laws. The second problem, which was already mentioned today, is the interrelationship between access to information and

protection of personal data. I think that this is a very serious problem because, for instance, information about Internet users, which is currently being collected and analysed, could be used in their interests—for providing products and services to these users. However, at the same time, this is a breach of their privacy. This is why I think that the appearance of the Internet will force us to rethink our attitude toward intellectual property and protection of personal data. We must think about finding a new balance, different from what has existed before and exists today.

L. Halligan:

Thank you. We also have our front row participants: Sofya Trotsenko, who is actually my neighbour in Moscow, Head of the Winzavod Centre for Contemporary Art, which is worth a visit; then we have Dmitry Konnov, next to Sofya, who is the Head of Universal Music here in Russia.

There are lots of issues swirling around. We have got tension between intellectual property rights and innovation and privacy, the impact of free access on commercial activity, monetizing, demonetizing, and the digitalization of the Dead Sea Scrolls. This whole panel could be on that topic – what an amazing thing. In the centre of this, certainly from a Western perspective, is Google – it is different in Russia of course. They are trying to organize the information, as Olof said. Steve, tell us what happened in Google leading to the creation of the Google Cultural Institute, and within that the Google Art Project. Why did Google feel that it wanted and needed to do that?

S. Crossan:

The Google Art Project, like many other projects in Google, started from a single staff member. History does not recall whether she was sitting on a bean bag at the time. Googlers have 20% of their time to devote to their own projects, and the art project started as a passion project from a Googler in the Madrid office, Clara Rivera, who initially wanted to do a project with a single museum, with the Prado. Essentially, through her efforts, and by persuading some other colleagues to tag

along and help, she managed to get that project done and launched in 2010. From then, it snowballed a bit, and two years later we have 155 museums. It is a real project funded by Google, and that was one of the precursors to the creation of the Google Cultural Institute. We realized that we had a lot of these projects going on around Google, usually from engineers or people in the marketing department who had some passion for some cultural institution or some cultural space and were trying to use Google technology to do something with it. We decided to formalize and invest in it properly. We now have 25 engineers and counting in Paris working on it full time, and we have decided to invest for the long term.

L. Halligan:

Susan, what does Google's initiative mean to you, the work that you have tried to do with the Israel Museum, and how has it empowered and allowed you to spread what you do and provide access to a broader range of people in Israel, the diaspora, and citizens of the world in general?

S. Hazan:

This has all happened really quite quickly. Our first project with the Dead Sea Scrolls started in September, the Google Art Project launched in April, and about a month ago Google Street View was launched in Jerusalem. This means that anyone can come to Jerusalem through the Google Street View project and walk around the old city, take a look here and there, come up to the Israel Museum, walk through the transparent door without buying a ticket, walk around the entire museum, look at the collections and, if they wish to take the time, look at the Dead Sea Scrolls. This is mind-boggling. This is science fiction, and it works. It is all transparent and all there. All you need is a computer and a bit of Internet access, and the world is your oyster. We are very pleased. It all happened so quickly that we have not had time to think about what has happened.

L. Halligan:

This is a question for Olof, then for Mats. What do you think of the Google Cultural Institute? Does it strike you as unequivocally positive for the world, or do you think that it is partly, if I might say so, corporate public relations? Or can it be both?

O. van Winden:

I think it makes sense to go into the art world, as art is part of our cultural heritage. If Google is trying to organize the world's information and make it accessible, they need art in there as well. It is part of history, part of our cultural heritage. It makes sense and we should be happy that Google is doing it. Of course I talked about the "Don't be evil" quote, and I think Google is doing something quite good, as well as keeping the Internet quite navigable and providing us with information that we need. The search engine gave us new methods of working and changed many industries. If you look at the music industry for example, it was not only Google that was on the Internet, but also Apple with iTunes. The whole industry changed. If we look at spreadsheets now, artists before made money on making albums and toured to promote. Now they make money touring and need to make the album to promote the tour. To come back to your question, yes, I think it does make sense that they are going in this direction.

L. Halligan:

Mats, what is your take on this? You have obviously been in telecoms a long time. A lot has changed.

M. Granryd:

Absolutely, I think this is fascinating to hear. This panel talks about culture, and it is now possible to walk the streets of Tel Aviv and see the Dead Sea Scrolls. If you just look back in time, as Olof said, it was not that long ago that we did not have this possibility.

Let us look at the journey that we have made as telecom operators, not specifically Tele2, but the industry. In 2001, we ended up moving away from connecting people,

we moved away from the fixed to mobile: instead of calling a wall, we call a person – we call a pocket. We went mobile. That was the first revolution in my industry. That was some 10 years ago. Then, six or seven years ago, the world went from being voice-centric to data-centric, and that was the second revolution. 2008-09 was the pivotal point when fixed Internet was overtaken by mobile Internet. Now you do not need a PC, just a smartphone to be able to use the Internet. My industry is now much more about providing access to content. That can, in the first instance, sound very easy, but it is actually fairly complicated.

We are present in half of Russia, in 43 regions. We are present in many other countries as well and we see this digital divide activity as crucial and critical for society. It is not that everyone has access: even if you have a phone you must have affordable connectivity. You must be able to pay for what you are using, and we have to charge because we need to build up our network. Affordability is one point, coverage is another. I need to use my mobile phone wherever I might be. Those are two really important things. The third thing is knowledge: one needs to understand how to use the device. And as you rightly said, some 2 billion users are online currently out of a population of 7 or 8 billion.

L. Halligan:
Should this be a part of the school curriculum?

M. Granryd:
It is increasingly so. Absolutely, I think that is the way forward. Studies have shown that for every job opportunity taken out by the Internet, another 2.6 opportunities are created. The introduction of the World Wide Web and viewing culture as content is really fantastic. I agree completely: it should be a more integral part of our education system.

L. Halligan:

I know Olof wants to come back in, but I want to bring in Mike Yao. It seems to me that whenever I travel to Asia I see the next gizmo that is going to arrive here in Russia and London in six to 12 months. Mike, how actively are these issues being discussed in Asian society? Or are you guys so hooked on the latest game and software that the progress is completely relentless?

M. Yao:

I guess I am biased, as I live in Hong Kong, a city obsessed with chasing after the latest technology. It is where things happen and people line up to buy new things. In general, in my observation and research, I find the Asians, in particular the Chinese, are very aware of a lot of things that are changing – new technologies that are changing society – so it is part of everyday discussion. It is part of consumption, and the trend for people buying these things is driving a huge part of the economy. But at the same time it has its unique problems, or challenges to the traditional assumption about government and civil society, so there are a lot of interesting issues to be discussed with Asia. I think it is a very fascinating time to be in Asia, looking at the impact of technology.

Going back to a very interesting project like the Google Art Project, I think we are at the cusp of a new era, having spent the past 20 years organizing information for users. Now, as the art project and other cultural projects indicate, we are entering a phase of creating experience, not just information and making the documents available for people to read. Can I experience something that requires a more humanistic approach to technology? Can we really enjoy a concert in the same way we enjoy it live in a stadium? Can we enjoy music differently? Can the virtual museum or art gallery offer more than just a collection of paintings sitting on my computer? It adds something. It requires us to really think about what it means for users to interact, and what the technology can offer apart from just information, offering experiences. That is the challenge.

L. Halligan:

I know a lot of your research concerns avatar communications. How far can we go? How real can the experience be?

M. Yao:

It is anybody's guess. I think it has come a long way since 2000. A lot of the virtual reality gear required so much hardware and software gadgets, but now recent technology has really offered just a simple camera on top of a television which allows us to experience something – not necessarily a virtual reality from science fiction, but it gives us a very high degree of immersion, allowing us to experience an environment that otherwise we could not. The technology is there, but it is a matter of focusing on the users: what do people really want? Can the cyber environment space offer something more than just an archive of the real world? That is the most interesting dialogue.

L. Halligan:

How big is this for Google, Steve? Is it a big revenue commitment? Is it going to be an ongoing part of what Google does? How seriously is it taken within the institution?

S. Crossan:

It is certainly an ongoing, long-term commitment, and one reason for that is that we are only at the beginning of discovering what is possible – Mike is absolutely right – and discovering how to explore and co-create this material online. The Internet is, crucially, not just about publishing from a centre to a periphery. The real power is connecting people to content and connecting those people to one another in that context. There is a very long way to go as to what is the right experience, therefore the commitment must be long term.

On your point about how seriously it is taken by the organization and your earlier point about whether it is essentially just corporate PR, I do not think there is any doubt that there is an element of corporate PR to it. One reason we invested in it

was to demonstrate that there is value in what technology can bring to the cultural sector and to show by proofs of concept that institutions like our partners can get enormous amounts of value out of the adoption of digital technology. There is a good story to tell as well. Having said that, we are a real group of Google engineers who have worked at Google for a long time on many projects, and we are definitely here for the long term.

L. Halligan:

Oleg, I wanted to bring you into this. You were honest as you talked about some of the conservative forces when the Internet first began to influence your industry. What would you say is now the view towards online publishing in the traditional legacy publishing industry? Is it really sustainable to provide access and monetize the books that you produce? Will we eventually end up in a situation where there are no physical books? That is what I really want to know. I like books.

O. Novikov:

I would like to hope that we'll be successful in this. If we look at the experience of the Western countries and primarily the USA, we can see that even today the publishers receive up to 20% of the profit from the online sales of e-books. This is a significant opportunity to increase both the accessibility of the books and monetization of literature. There is also an opportunity to develop other models, apart from selling e-books. Western countries already have experience in subscriptions to e-books. I hope that this year we will also be able to offer our readers a good subscription model. We are being actively exhorted to use advertising in our struggle with piracy. However, the advertising model of selling books hasn't worked so far, and probably will never work—we have already considered this issue.

It is very important to find a balance between accessibility of reading and knowledge online; and protection for creators of this knowledge—protection of intellectual property against direct theft. If we destroy the framework which produces

knowledge, if the knowledge creators will not be able to earn money, then, in time, the interest to create something new will be lost. Passion itself will not be enough. In the West, this issue has almost been resolved, although not fully. In Russia, this is still a serious problem. Although we can see that the situation is changing. The telecommunication companies attempted to make some money on traffic in the past and in some ways they were an alternative to the copyright holders. However, today they understand that they can earn a lot more by legally distributing content, which makes them our allies. Overall, I am optimistic about the opportunities for publishers, because apart from books there is also multimedia software, learning software and other new products which allow us to expand the boundaries of our industry.

L. Halligan:

While we are on the subject of monetization, I want to bring in Sofya and Dmitry. I also want to take the conversation on after that to privacy and intellectual property rights, which I think is at the heart of a lot of these issues. Then there is politics: we have heard Julian Assange mentioned and we have got the Deputy Minister here. Is the Internet useful or not useful for politicians? Or both? Then there is the whole question of Russia's place. That is plenty to be getting on with.

Sofya, when you hear Susan talking about people around the world entering her museum through a locked door, paying nothing, looking at all the work, what do you think? It is not monetized. They do not drop litter and you do not have to have the lights on if someone in New York wants to look at a museum in Israel in the evening. But as a curator yourself, interested in disseminating art, is there any part of you that is scared by this because we do need to monetize art and content? Otherwise artists and creators of content and even journalists cannot live.

S. Trotsenko:

Thank you for your question. I think that, for traditional museums, expanded access to cultural heritage and the widest possible distribution of information about their

collections are very important. We know that far from all objects can be exported out of Russia, that many people don't have the opportunity to travel and familiarize themselves with artworks. The contemporary art that we work with is fundamentally looking for new forms of expression and self-conceptualization. Of course, the Internet provides enormous opportunities for this from the viewpoint of expanding our audience and for new forms of self-expression. I would like to say that for the commercial sector and for the art market the Internet is important because it enables us to find new ways of selling our products and communicating with clients. For example, in New York this year a first ever VIP art fair took place – an art fair that was organized by several gallery owners. As far as I know, they had a few technical problems which did not allow many visitors and clients to participate in the event. However, this is still an important step towards expanding our audience. And, of course, art itself finds a space for self-expression, because art cannot exist without an audience. I think that the global questions, questions of culture and education are very important. They also concern those who are involved in the monetization of artworks, since we understand that there are institutions that make money on this. I think that we will find ways for solving these issues.

L. Halligan:

Thank you. Dmitry, you and Universal music, if I may say so, have been at the forefront of the debate here in Russia about demonetization. Tell us what you've done, why you did it, and what kind of opposition you came up against, maybe even within your own company?

D. Konnov:

My name is Dmitry Konnov and I am the Managing Director of Universal Music in Russia and CIS. Universal Music Group is the largest musical company in the world. It controls about 40% of the global market. Unfortunately, we do not have sale-based musical charts in Russia, but if we look at the market share research, we can confidently say that we are the leaders in Russia as well. We have been involved

with e-sales. Specifically sales, since our discussion today is mainly about theoretical issues, or the issues of preserving cultural heritage and the Internet, since 2006. Both our company's revenues and net profit have been growing. In 2006, our profit from e-sales was 2%; last year it was 36% and this year it is 42%. This is from our year-to-date database. This is because there are particular conditions in Russia in relation to music consumption. Musical content, specifically content, is not the same as live performances. We are talking about two different businesses, although for the average person they seem the same. The target market for musical content in Russia is up to 25 years of age, perhaps up to 30. After 30 years, someone who is interested in music is probably not going to be considered normal by his neighbours, friends and family. Over three years, we have observed a 100% digitization in the Russian target market up to 25 years of age. These people are not interested in radio, they long ago stopped watching television and they receive all their content from the Internet. This is why the Internet is the best place for us for contact with that audience, which is looking for what we produce for them.

The main problem in our industry is piracy. In the past the pirates – representatives of the film industry will also remember those good old times – sold music on physical CDs. We had to compete in price. A legally made CD could cost 200 roubles and a pirated one 50 roubles. The Russian online pirates, as you know, have come up with a different working model. The site VKontakte, which is based in St. Petersburg, came up with a model which produces enormous profit from advertising. The only problem is that the current Russian law does not provide protection for copyright holders. Since the government, unfortunately, is ignoring the rights of copyright holders, we have tried to find other methods for resolving this problem. In particular, this is the so-called freemium service, where certain high-quality musical content is accessible to the user for free. It is usually paid for by the platform. However, if you want to receive this content offline, you will have to pay a small amount.

I could give you an example of another Internet portal, Yandex, which on May 30 launched a first similar offline application. For now, this is only an Apple app. The Android version will be launched in the next couple of months. I would like to point out that the situation in the Russian market is very specific, since we do not have iTunes or Spotify. None of the successful Western musical services for selling music and musical content work in Russia.

L. Halligan:

Let us move on. There are so many other subjects to get on with. Regarding online privacy, you may know that the British Government is currently proposing legislation to allow the police, without a warrant, to observe to whom and from whom British citizens send and receive emails. They need a warrant if they want to look at the content but, for many in the UK, this is a step too far. Mike and Igor, I know this is your core speciality. Mike, regarding online privacy, will we ever be able to insulate ourselves from people prying in our inboxes, prying into our searches? Will we ever be able to make our computers completely hack-proof?

M. Yao:

No, I am a pessimist on this issue. I think a lot of the discussions about online privacy have relied on the metaphor used to talk about off-line privacy. We borrow these terms – like firewalls – in order to understand what goes on in the online world. But a lot of these metaphors are conceptually helpful but not accurate, as the digital information is stored differently. It is a piece of computer technology. When we deal with privacy, it is very easy to slip into a conversation about technology and legal issues. I spent a good part of my academic career looking at a dimension that is often dismissed in the public discourse about online privacy, as well as considering the legal policy and technological issues that affect the user experience and the user side of it. A lot of the reaction and negative emotions displayed by users are not technical or legal issues. If you ask most users if they care about their online privacy, everyone will say, yes, they do. Then, if you ask how much they

know about specific ways their privacy will be violated, how much they know about the actual technology behind these private data collection methods, very few can answer. Then ask if they are familiar with the privacy laws in each country, and even fewer can tell you about that.

L. Halligan:

But that is not their fault necessarily. My mum does not want to have her house burgled, but what does she know about window security? Probably not very much, but that does not make it OK for someone to burgle her house.

From the audience:

She probably puts it on Facebook that she is gone for the weekend.

M. Yao:

Exactly. That is a good example. I think very few people are thinking about this. It is easy to say, "I do not want people seeing me in the living room, so I close the curtain." But the problem is metaphorical privacy: online it is very difficult for the typical person to truly grasp the consequences of what they actually do. One example is that a lot of people post photos on Facebook, and those photos themselves are harmless. But would we post personal photos with images of our bedroom and who we hang out with in a hallway of a public space? We do not. Somehow we think that Facebook or social networking sites or digital environments are private because they engage in this communication in a private setting. It is really public, not private communication, because the information that you are sending out is really there, even though the action of communicating with others takes place in the private setting of your bedroom. It is this cognitive conflict that creates a lot of issues.

L. Halligan:

Just before coming to Igor, I want to ask Manuel a question. As an online government in the Philippines, has there been any push back from your population? I am sure many people like what you are doing in terms of making services and information more accessible via the Internet, but has there been any push back in terms of concern that the government is prying too much into people's lives?

M. Quezon:

I think the concern is that if this proves successful it may lead to that sort of thing. For example, one of our greatest debates in our country is over the question of a national identity card and all that that implies. That leads to data privacy issues, etc. The question really is one that affects us all, whether you are an art or media institution (I came from a media institution before entering government) or government. There are three major questions: curating, validating or providence, and ethics. All of those are involved because your selection of information to present always includes the decision of what not to include. The question of what to put out leads to questions of trustworthiness or believability or usefulness. The third point is about this whole process, which is making the decisions. The public interprets it, it becomes a question of ethics and the bottom line is something which was asked about here before: where is the money? That is where the question of legitimacy comes in for all of these three steps.

L. Halligan:

Igor, we have talked before (other panelists have mentioned it) about how it is great to have all of the information out there. If you are a scientist or an inventor you can see what other people have done. But does this not stymie innovation if there are not very secure intellectual property rights? Can those intellectual property rights be secured across borders? I imagine this is a lot of what you have been thinking about in your work with Skolkovo.

I. Drozdov:

Of course, when we talk about education, we think about intellectual property. Innovations are impossible without high-quality education. We view the education system in Russia as, to some extent, isolated from other countries, and we would like to see a greater integration of this system into the international community. The Skolkovo Institute of Science and Technology was created in partnership with the Massachusetts Institute of Technology – this is the first international technological institute, which was created 'from the ground up'.

Since access to information, access to knowledge is essential, we support correspondence education opportunities and access to foreign publications. This will significantly increase the potential of our scientists and students. Of course, there are intellectual property restrictions in this area as well. Copyright holders are very careful about the expansion of so-called 'fair use', although I believe that even in the USA this list is longer than in Russia. Currently, we are witnessing the discussion of changes in copyright legislation and seeing that copyright holders and consumer representatives are on opposing sides of the debate. But I think that we can find a compromise.

I'd like to say a couple of words about protection of personal data and the right to privacy. I think that users themselves are not particularly interested in keeping this data secret. There are a range of companies in Skolkovo, which aim to provide products to consumers based on their preferences. For instance, someone goes shopping and can immediately use a mobile device to see which shops in a large shopping mall they will find of interest. Or, we can send them news that they will find useful. So people prefer specific products and they do not particularly care about hiding their preferences. You know that there are many applications that allow people to share where they are and what they are doing. Therefore, I think that we need to rethink the issue of personal data protection. I know that the Europeans have a very strict approach to this, but the Americans approach it more freely.

When I listen to the opinions about government services, I remember about my past experiences – I used to work in a courthouse. There is a practice in the arbitration tribunal of allowing open access to court documents which provide information

about the opposing parties, the facts of the case and other details. The discussion of these is continuing. Some say that it is bad for the company when everyone knows whom it is suing, what is it doing, etc. Others think that it is a good thing, because it provides the opportunity to check prior to signing contracts whether the potential partner is litigious or currently being sued. In the end, it serves the interests of the society. By the way, our European colleagues are unable to understand this.

It is quite possible that we will have to discuss these issues on an international level: what exactly do we understand as private life, precisely what do we need to protect, and what has any actual value.

L. Halligan:

I guess in some ways the dilemma of this kind of innovation and intellectual property rights has a similar dilemma in the cultural sphere too. Susan, what quandaries and arguments in your mind and those of your colleagues did you have before putting something as precious as the Dead Sea Scrolls up on the net, where anyone can rip it off and make posters? It is not just a valuable image, but a sacred image. There must have been some dialogue before doing it, with all of the dissemination advantages that it brings. It is not only a positive, is it?

S. Hazan:

We had some tough discussions with our curators, particularly the curator of the Dead Sea Scrolls, about how we would present this precious Isaiah scroll, which is so precious that our government wrote a law that it can never leave the country of Israel to go abroad. It is too precious. We had to be very sensitive to this, the most ancient book of the Bible, six metres long, rarely on display, but very important to Jewish and Christian communities around the world. Issues of copyright are also quite complicated. You think Isaiah is a prophet in the public domain, that it is God's words. That is no problem. However, when we put that in the public domain, we also put up an English translation, and we had to recognize the IPR of the translation

and also to find which translation is appropriate, which is very complicated theologically and academically. Once you put the translation in this window where you can read the Hebrew, instead of reading the Hebrew you can go to the English verses in a pop-up window. But which English version do you use? If you are a German is it the Lutheran Bible? Is it the traditional German Bible, or the Catholic or Protestant Bible in England? Which version to use is something we have not resolved.

The Hebrew is relatively easy and there are two versions. Our scroll is from 700 BC and there are variants from our scroll and the canonized version of the book of Isaiah in Hebrew. There are 2,750 variants, so in Hebrew we have two versions and two translations on the website: the traditional, modern, canonized version from the third century, and a very close reading from Professor Flint of Trinity College in Canada, who has made it his life work to translate verbatim the Hebrew book of Isaiah that we have, with the variants in it. We have put these two versions side by side. These issues are very serious, and if you are worried about individual privacy laws while being respectful of the most important patrimony of your country, you have to be even more careful when you hold it on behalf of the community that you treat the material incredibly sensitively.

L. Halligan:

Before I give the floor to Olof, Deputy Minister, I know that the Philippines has been developing online a 'World War II in the Pacific' project, again a potential cultural and political minefield given how the world and the Philippines' alliances have changed since then. Is this an ongoing project? Tell us about some of the discussions going on in the government, just briefly.

M. Quezon:

Yes, definitely. We have to present official history because of being an official institution. The dilemma we are facing is that institutions that are used to speaking with an authoritative voice are now merely part of the conversation, so you must

justify every action and the question becomes one of transparency, disclosing the editorial choices made and being rigorous about source attribution and the pictures and videos that have been put forward. To open up a conversation with the public so that nobody feels excluded by this massive official point of view is also important. That is the only way to get legitimacy, and in this case we have been lucky with public acceptance from academics and the public. It was those three approaches that we used.

L. Halligan:

Thank you very much. What is the site for that? I would like to look at that.

M. Quezon:

It is very easy to remember: www.gov.ph. That is the official gazette and everything is there.

L. Halligan:

Or you can Google it – or you can Yandex it, which brings me to the last part of our conversation. Please raise your hand if you want to participate in this part. We are in Mother Russia and my kids use Yandex and not Google, Steve.

S. Crossan:

Absolutely, and Yandex is a great example of how a local organization can use the Internet to create an enormous company in a short time, and reach a dominant position in the local market. Russia is not the only example of a country around the world where there is a local competitor focusing very much on the local language and on local information. By doing so and having a strong focus it can put together a very strong market position. Yandex is a great example of that, and Yandex is terrific for us, frankly. It gives us something to aspire to and something to compete against, and it helps us when people are complaining of Google being too dominant: there are these examples which show that the competition is just a click away.

In the history of the Internet there are countless examples of organizations that have risen to an apparently dominant position, only to fall away again – MySpace in social networking, Hotmail in email. It goes to show that a consequence of the openness – we are talking about the natural openness of the Internet versus other concerns like privacy or IP – is that barriers to entry are extremely low, and that means that innovation happens all the time. Some dangers of Internet overregulation are that you stifle some of that innovation, and the danger is that that would be good for incumbents. Internet regulation might turn out to be good for Google and bad for the next organization that is going to disrupt Google and take over, and that would be bad.

L. Halligan:

My company has offices here in Moscow, and in London. In London, when our photocopier breaks, our very well educated secretary phones a very expensive engineer who may or may not turn up that day and who may or may not be able to fix it. In our Moscow office, our less formally educated secretary, without taking off her high heels, takes the photocopier to pieces and fixes it. If she has a problem, she gets in touch with friends on her mobile phone, and says, "We can land this plane by remote control." There is an absolutely incredible level of technical skill, determination and ingenuity in this country, if I may say so. How far can Russia go? How big a presence will Russia be in the IT space globally when we are playing golf, aged 65?

S. Crossan:

I think at that age there is no doubt that Russia will be the biggest Internet market in Europe. From the numbers, looking at the population, the rate of growth and the rate of Internet penetration, it will be bigger than any other single market in Europe from an Internet point of view. That will put local competitors at a great advantage at a European level and at a global level as well. That example you cited of people who have grown up with technology, who are very comfortable with technology, with

or without a formal education in it, having the willingness to dive in and do whatever it takes to fix a problem: you find that replicated everywhere. This generation is brimming with entrepreneurial talent all over the world. In every single country in the world, this generation has grown up with the mobile phone and the Internet, and it is absolutely brimming with entrepreneurial talent. It is from this generation that we will emerge from this crisis that we are in, because in Russia or anywhere else in the world – in France, where I live – it is only through those people that we are going to emerge through the current situation that we are in.

L. Halligan:

Oleg, coming from a legacy industry that is rapidly innovating and adapting, how big a part do you think Russia and Russians can play in this ongoing IT revolution that Steve has described? Do you agree that Russia is currently punching below its weight, not just in terms of population size? This country has the highest level in the world of advanced degrees in its population, many of which are in maths, science and engineering.

O. Novikov:

We would like our country to become a leader in technological progress, in new developments, and the gaining of new knowledge. The Soviet education system worked for many years and it still allows us to remain a leader in education of the population. Everything that was created in the last few years is based on this. That same Yandex is a good example of how people in Russia managed to create an alternative and compete on equal ground with a company like Google, even if only in our country. I hope that we will see more examples of this, and I agree with my colleagues who speak about the importance of investment in education. It must be developed with books and the Internet, by widely exploiting the growing accessibility of knowledge. Are we going to be able to correctly use new opportunities, since it is not just the people in Russia who understand the current situation? All developing countries are actively investing in education, without sparing any resources. Both

past Soviet experience and our current understanding of what is happening in the world are telling us that without education our country will fall behind. We cannot rely on the Soviet momentum; we need to create something new in our educational system. I am certain that we will be able to do this.

L. Halligan:

I am sorry I have not brought everyone in more. Mats, you see the commercial opportunity clearer than anyone else here. We all know about the size of the Russian market, the growing spending power and so on, but briefly, what can you tell us about the quality of the technical people that you have been employing here in Russia, and how big do you think Russia will be when you are a retired man in your island off of Stockholm?

M. Granryd:

This is perhaps a silly example, but we are present in 11 countries and quite often I get small SMSs from my technical department that we have an outage in Croatia, we have problems with pre-paid in Sweden or some data problem in Norway. I very rarely get such emails or SMSs from Russia. I completely agree that the amount of horsepower and brain power in Russia is tremendous. I also think that it is punching below its weight due honestly to a lack of innovation and the lack of a true understanding of the power of data. I think that the revolution going from voice to data will influence us as human beings to a far greater extent than we can possibly see now. It is a thrilling time to be a part of this revolution right now, and I think Russia will, in five to 10 years, with initiatives like Skolkovo and innovation forums like the one that is to be held in Moscow in a few months' time, slowly but surely get back on track with regard to these things.

L. Halligan:

Mats, thank you. We will have a quick comment from the gentleman at the front, and then the young man, and then a few final words from panel members.

From the audience:

There is another very important Russian experience that everyone speaks about the Internet today must remember. In 1917, the Great October Socialist Innovation, or Revolution, took place in this very city. What it was about was that the workers of the city went into the streets and said: "This is the information superhighway. All shops on the street now belong to us. I can use everything in this bookshop, in this jewellery shop and so on." Then they went to the peasants and taught them that bread does not belong just to them, but to everybody. And we know the rest. I hope that what I'm hinting at is obvious. The October Revolution was probably an innovation. And the Internet is also an innovation, we understand that. But those great names that you have mentioned – Google and others – are, at the same time, the criminals, just as the communists were also the criminals. They steal other people's property. And what does that lead to? If you walk onto Nevsky prospect, you will see buildings which were destroyed back in 1917. We have not been able to restore them in 95 years. If that is how you want the world to look – fine, go ahead.

L. Halligan:

Thank you for that historical reference from the gentleman here. Do you need a microphone? You look like a young man with a loud voice.

From the audience:

I remember when the arts and entertainment – I am a film producer, so I know more about entertainment – were far less available. We had very few exciting films and books in the Soviet Union. There used to be this element of discovery about each one of them; there used to be this thrill and surprise about them, and it was a great feeling when you managed to get this. But now it is everywhere. I do not mean to sound provocative or anti-progress, but how do we keep the value of art or entertainment if it is free and everywhere? What do we do about it? It seems to have no value if it is everywhere.

L. Halligan:

I think, with respect, you have beautifully summed up the central dilemma of this panel, and I congratulate you for that. We are over time, this could go on for a long time and unfortunately people have other things to do. I just want to run along the panel and get some very short thoughts from everybody, starting from this end, on how big a role Russia will play in the global IT industry over the next 30 to 50 years.

I. Drozdov:

I cannot speak about damage to information and entertainment when they are used by many people. If a stranger comes into your house and stays there, it is not very pleasant for you. Someone mentioned the 1917 revolution. I would assume that the owners of these houses did not particularly like it, because they liked living in their houses themselves. When we talk about information or entertainment, although I was mainly talking about access to information for knowledge, and not about entertainment, then we understand that information in its pure form is intended for use by many people. Information is not ruined by this, it does not become worse. So I don't think that this is a good comparison. Does the value of art objects drop if we look at the museum websites and admire them? Of course not. It was already mentioned today that, in Asia, people are working on creating museum sites so realistic that you feel that you are seeing them in person. It is a bit hard to believe that sensation can be transmitted. Although the Internet is able to provide opportunities which are absent from a traditional visit to museum. I think that these issues complement each other. The Internet is not going to replace or supersede direct contact with art objects.

L. Halligan:

If we could have just a few sentences from each panelist, please. Mike, this is your first time in Russia. What is your impression?

M. Yau:

It is a beautiful place, a beautiful city, and just a wonderful experience. I grew up in China as a teenager, so I spent many years in school studying all of these things I admire about Russian culture. Then I moved to the United States and heard very little about Russia. I am glad to see some things that I heard about and admired so much when I was little. It is a gorgeous city. But the daylight lasts too long – I need to sleep at night.

L. Halligan:

Olof, what are your last thoughts?

O. van Winden:

I think the biggest problem with the Internet is that it is very young and it will be the next generation who will really provide the answers to this problem. It is a new tool and we are still using it with the old business model, trying to monetize things. Google is giving information for free but they have another business model where they get their money from, and that is a good example. We should stop trying to monetize everything. Presenting artwork in the virtual space, for example, is not only presenting it to the public, it is also for research purposes, for archiving it. I wish everyone good luck in the future.

L. Halligan:

Deputy Minister, please go ahead.

M. Quezon:

We are at the point where, just as we are about to achieve a consensus on the problems and what we are doing, something is going to change and throw it all up in the air. Very soon we will be able to type in domain names in non-western alphabets. Just as we are at the point of integrating and learning best practices from each other, this will lead to the online equivalent of what they did in the 1920s when

everyone put up tariff walls against each other to try to protect their competitive edge and their markets. This, I think, has not been addressed in discussions.

L. Halligan:

Oleg, what are your last thoughts?

O. Novikov:

Unfortunately, we cannot speak of Russia's leadership in the area of art. This trend is missing altogether, just as the foundation for it is missing as well. It is missing because it needs two things – first, freedom of the artist and the opportunity to live in a free creative atmosphere; and second – protection of the artists' intellectual property. Neither of these currently exists in Russia. And if the situation does not change, we will not be able to join the ranks of the world leaders.

S. Hazan:

You can actually see the Hermitage Museum on the Google Art Project. It has been there for about a year. I am in St. Petersburg and, believe me, I am going to go to see the Hermitage. There is no way you can compare, as beautiful as the technological solution is, with the real thing in the museum. That is the point.

L. Halligan:

Hear, hear. Mats, please go ahead.

M. Granryd:

The question was, do I believe in Russia? I think it has two things going for it: the cultural heritage with the artefacts and things in Russia, which has an extraordinarily deep and rich culture, and secondly, the brain pool – the academics who are striving for growth. Those two things will continue, I think, to have my industry drunk on the growth of data. That also means access. It is something that I am convinced will fuel the future, in a nice way.

L. Halligan:

The last word goes to Steve.

S. Crossan:

I think the answer has to be clearly "Yes". All of the elements are in place. Are there national champions which people can follow in the start-up industry, and which create their own system? Clearly there are. Yandex has a USD 8 billion IPO, the largest IPO in the Internet sphere anywhere outside of the United States and China, twice as large as the biggest Internet company at its peak in the UK, for example. There are Russian entrepreneurs all around the world heavily involved in Internet start-ups, not least Google, but there are also many, many Russians in London. Many other major Internet brands around the world have been founded by Russians. The only thing probably needed is to think about what the regimes are that will make those people more likely to start their businesses in Russia, rather than in London or New York or California.

L. Halligan:

Ladies and gentlemen, thank you for indulging me. We have gone eight minutes over, and I would like to sincerely thank our panel for a fantastic discussion that I will not even begin to try to summarize. The moment I try to summarize it, technology will move on and the consensus will wriggle away. I would like to thank Tele2 and Google for putting this panel together, and I would like to thank you all for coming. Finally, I thank the interpreters for dealing with so many technical terms.