Thank you. Good afternoon. Can you hear me. Without shouting, you can hear me. Yes. Good. What about our colleagues online. The sound the working girl. Yes. And Kat could you hear me us Yes, definitely. I can hear you but that's. Yes. Excellent. Good. by Okay, we have one of these difficult session after lunch where the distribution of the blood between brain and stomach is not fair. But I can promise you a good session that will make will use artificial intelligence in order to make to impact the metabolic ism and to have the motivator distribution of concentration, energy, and hopefully passion for our discussion. Today we will discuss the impact of AI on diplomacy and mediation. And we have an excellent lineup, my colleague Katharina Höne, with connecting online and making this session, gender, diverse thank you thank you Kat. I don't know if it counts if remote participation in the gender diversity. That's it counts. Excellent. And keep a please, whoever is in charge of technology keep Kat overlooking us. And, and that does that but Kat Dr Katarina Höne, you know, people from science diplomacy community is person behind this session, she conceptualize the end brought together a few lines of work at Diplo and the Geneva Internet Platform dealing with artificial intelligence data and under the issue. Let me just continue with the introducing the remote participants, we have with us also Dr Andreas Hirblinger postdoctoral research fellow I guess Center on Conflict, Development, and Peacebuilding, Graduate Institute in Geneva Andreas I hope you can hear us. Yes, so I heard something. No. Okay, Kathy's cat is confirming them that that's that will work, and easy to rehab, we have with us, Mr Sameer Chauhan. I'm always careful in pronouncing it was it was okay thank you. I'm the victim of the mispronunciation of my soul, my last name, therefore I, I have a full empathy with the, with the, with whoever has a complicated the last name and first name but I managed One person who is bringing the technical expertise and knowledge, what is going on under the bonnet. When we do when we got excited discussing AI and ethics and you know this this grant issues. He comes in case okay let's tell you what is going on in the reality therefore we're really honored to have to have with us. Sameer to, to provide inputs on a but also ICC is doing here and we're particularly honor that the Sameer is a company but Marco Liuzzi. Is it correct perfect for me trying to get things right spite to the after lunch session. Marco who is the chief Operations Division of the UN International Computing Centre also impressive bio and background in technology, working in Brindisi. By the way, for those of you who do not know. International Computing Center has a big center Brindisi does in Italy which which operates quite a few servers and other tools. And next to me is another Jovan. His name is Jovan Njegić. Jovan, one is a head of Diplo AI and Data Lab, which is hosted in Belgrade. The close AI and data lab. Therefore, when you see all of these applications that we have been running. This is basically done by Jovan and his team and we'll see we'll be seeing you. on AI and data. Okay, this is the lineup, we have everything ready for really good discussion. And they should answer three questions. And hopefully nobody fell asleep during our risky sessions afternoon Boris I'm watching their carefully, you are you're okay here. You're in the first round, but this is a good friend of deployment gap, philosopher thinker of Geneva scene, and the person who reflects on many issues which are going in Geneva and you can learn probably from Boris, I would say he's a you are among the top five people who understand cross linking nature of international Geneva. You may leave us for the session on the green, in your opinion, but you don't have to sleep. Okay, we have a few questions to discuss today. The first question is which tools have been developed and demonstrate this as a pilot project and how they impact the work of diplomats and mediators what works in practice, whether are the concrete tools that we can can use this the first question second question. How can conversation between diplomatic practitioners,

and the developers of AI application be facilitated for creating needs oriented tools, I'm sure that we'll be hearing a lot from ICC experience because you are often under this borderline between, between diplomatic and technical professions. And the third question, why is it important to have this conversation now, because they're here, and voter the some of the current and potential future challenges, sort of, sort of questions is let's see what what exists now, what is a problem in communication between different communities, and what is ahead of us. There are a few principle one principle is that they only stupid question is the question which is not task. But, therefore, please ask the question, challenge our thinking, bring experience inputs from your experience. We have a lot of expertise here in the room. Therefore, please feel free to raise your hand and and the viola Viola considered a priority also with the remote participation Catholic help us on on on that. Now we decided to do to to make this session a bit more interesting in the, in by trying to walk the talk, will speak about discuss AI. But today, depots AI lab. to report from this session. Therefore, we will transcribe the first half of the session, we cannot do it, whole session because for creating knowledge graph, you need a bit of time you cannot do it in real time at least Diplo doesn't have the powerful computers. And then we will present at the end of the session results of this analysis and, including. How would. How would machine map for the project. The idea is to see what is the knowledge button developed by six of us during discussion, how this knowledge button relates to other knowledge at Wikipedia at Diplo, and you have and what, what else can you tell us in this introduction how it will work. Well, basically, we will use a algorithms in order to first to transribe audio from the session to the text, then we will analyze the text by extracting the names entities mentioned in the discussion and then we'll try to extract relations between those entities mentioned, and then we will go to some open source knowledge gaps and the knowledge bases, which are publicly available online such as Wikipedia, babelnet, DBpedia etc and try to link those knowledge is to depth knowledge gaps and to extract some information, which could be useful. And finally, that mini Knowledge Graph vacated from this session we will try to embed two into the deeper knowledge graph, which consists of all blogs updates posts books from the deep organization people geographical countries and and stuff with that so we will try to see how he doing to the, to the topics and sub topics which are available present in deeper knowledge graph. Thank you. Thank you. You're on the same name and we have to find some other ways not to confuse the audience, we, what we are going to the concept behind this broader concept is that we can have artificial intelligence or small and targeted data. We don't need to wait for Facebook and Google to to collect big data. And this is the first point, therefore this is conceptual challenge can be that again data, any particular patterns that describe our lives because everybody's focusing today on data protection of data, but the major battle ahead of the head of us is a battle about the patterns buttons in culture patterns in arts patterns in our day to day behavior, therefore today, six of us will create some pattern. Should it be owned by six of us should it be owned by Jessica and deploy an ICC or global, in our case is a global commons. But the key idea is to challenge the idea that, but somebody who collects a lot of data can also on the patterns of our behavior. Mind you, six or seven years ago we used to have 10 years ago the photos, you just download from the net nowadays if you want to download the photo to include, you have a shutter you have those, those stacks, and you have the privatization of the huge part of the photo heritage of mankind. One day in the most radical form, we may have the patterns from Cervantes or from the Aristotle or Plato on by some companies, which personally for me is a difficult, difficult notion. Therefore the major battle ahead of us on AI is battle for patterns patterns

of cognition relation and other things today will to knowledge graph as Jovan Njegić explain will try to see what type of pattern is we are creating during this discussion, and ultimately what we can do with these patterns, is global commons but that's just the challenge conceptual challenge with the normal governments, and I will say even philosophical impact. Now, Kat, Andreas and us. Let's be careful what you're talking, because now everything will be codified the knowledge class, we have to be. We have the No, I'm joking I don't know if I can recognize humor. I don't think so. We have some refuge still, where we can hide the from the machines. Kat the question for you based on your research, what are the ways in which AI can serve as a tool for diplomacy and mediation. and can you sort of introduced to us, broader mapping and overview what's going on and how are we should go ahead and Thank you Jovan and great to be here, even though it's it's remotely, and but I'm really happy we make this session hybrid, because we have 64 people here in the room, online with us so adding to the local audience. The usual question first. Can you hear me okay. You can hear me well. We can hear you I find the made that I know inappropriate joke that you've noticed already. Okay, fair enough. So, um, I really would like to use your question you want to provide a broad introduction for our discussion and ended up it off of a mapping. So I mean, the first thing you need to keep in mind is when we talk about AI we're talking about a lot of different applications, a lot of different totally different technologies basically as we are talking about machine learning, and then different applications of machine learning, such as image recognition, natural language processing, but also pattern recognition that then feeds into decision making. And when we look at diplomacy and conflict resolution and mediation, a couple of examples come to mind, what is important to keep in mind is that all of these examples are at the exploratory phase, as far as I know the pilot projects that are really interesting to look at. So when we talk about for example image recognition. One thing that comes to mind is the analysis of satellite images. So we're talking about looking at borders or the development of refugee camps movement of troops on the ground or even looking at natural resources and how they use and how they're developing and we talked about natural language processing. There are many examples and my colleague Jovan Njegic will go a little bit deeper into this but basically we're talking about is, for example, and speech writing help with diplomatic reporting and analyzing speeches and as in conference contributions and we will do this live in situ today. We will look forward to talking about things like looking at social media content, but also preparing for negotiations by analyzing previous negotiations and previous contracts. One of the examples I like to use in these contexts comes from the area of trade negotiations, and there for example it is said that the average trade deal the average trade agreement between two countries in the 1950s was about 5000 words long today it's 50,000 words long, so having a kind of way to automate this process or augment the human capability to analyze these treaties and be prepared for negotiations is becoming actually a necessity to some degree. So when you asked me about diplomacy and mediation, and how I can come into this field. They're basically five broad areas I think that's the know we're talking essentially first of all knowledge management and background research. Second, about generating a good understanding of the negotiation of the conflict and of the parties involved. Third, we are talking about creating a greater interactivity of the process, and a broader understanding of the situation, bringing different voices voices said would perhaps normally not be at the negotiation table for, we're talking about support in drafting texts or analyzing large amounts of text, and then fifth and I think this is really important when we talk about diplomacy in particular, peace negotiations, implementation, follow up, and

compliance. So, having having kind of provided a broad overview. I have two more philosophical points, if I may. And the first one relates to the fact that we really have to keep in mind that we are essentially building these tools and we have the agency to create these tools, and to build them according to two needs. So my, my emphasis here would be that whenever we talk about AI for diplomacy in mediation. I think the starting point has to be the practitioners and the needs of the specific negotiation and the need of practitioners what they are needing What are supporting them so we should not start from the technology, but we should start from what need are we trying to to address here and there, there's a quote I would like to bring into this conversation which comes from a historian of technology, his name is Melvin Kranzberg, and the quote is the following. Technology is neither good nor bad, nor is it neutral. And for me, this kind of exemplifies the challenge we have ahead which is obviously we can use artificial intelligence for good. We can use it for bad. But what we also have to keep in mind it's not neutral we are designing it we are creating the rules of engagement we are taking decisions at all steps of development of an artificial intelligence application. And my last point is a point on trust. Trust is so fundamental in diplomacy in peacemaking, and in mediation. And to think through how trust is shifting, or what it means for trust and diplomacy negotiation, when we introduce these kind of tools what it means for mediators what it means for diplomats, that is a house of really interesting questions that perhaps we can get back to in a discussion. And let me stop here and give the floor back to you Jovan. Thank you Thank you Kat for this great, great overview and the few reminders that should be the guardrails for our discussion in order to, to avoid any sort of hype driven, or marketing, which fortunately our panelists are here excellent and we want to give another spiel that these days you can hear about AI and related related tools. We would this. The stage is set for discussion, we are moving to to address address. You have been focusing on AI for mediation. Geneva is one of the hub of mediation, we have with us colleague Enrico from the UN who has been doing a lot on on mediation, and what are some of the opportunities and some of the pitfalls when it comes to use of a mediation, which I guess from your research and cancer research is is probably, together with the human ultimate frontier of the use of AI in diplomacy because mediations are intrinsically interpersonal developments, then you need to trust in the chemistry, especially in some conflict zones. Worldwide unrest. Andres, over to you. If you are with us, we haven't heard from you.

Yeah, you and I think the technology is setting betraying us in this regard because we don't have them in the room with us at the moment. So we're trying to get him back but let's see, okay, cut, try to mediate the solution. In the meantime, we are moving to, to, to, to Sameer. Sameer, you are at this your organization that you lead is under this border zone between diplomacy in technology, and you try to reduce Lost in Translation translation when it comes to concept but also you have to deliver a complete applications, organizations are asking, asking you to do, what would be your reflection on that negotiating This is borders on dynamics between policymakers diplomats and technical people, and in in also what are the concrete applications you have been developing shortly, thank you Jovan and then a pleasure to be here. So, just a bit of background ICC, are you and ICC. We are based in Geneva, and we support the entire human system with technology. So, starting from a history 51 years ago now we are involved in this nitty gritty of. Where's technology leading us and what role does the UN have to play in the space. So as we support the entire UN

system, we are involved in many many different solutions that need to be deployed and utilized for sensitive negotiations. So I'll give you some examples and where has been put to good use in my opinion. So a great example starts with the climate change COP. We were involved last year and given that till the last moment they did not know whether it would be hybrid conference on physical completely virtual. They had 50,000 plus participants. How do you register them. And how do you authorize them to have direct permission so they can participate because you don't want to have a situation where a certain parts of the world could not communicate could not participate, and they felt left out. So we had to put an AI based and biometrics solution to register on the delegates one night, and in a way that the AI bias was known. And in a very short period of time we had to minimize that bias, so that we did not have certain parts of the world where delegates could not be registered, or were not recognized, when it was their turn to speak so some really complicated naughty challenges that we encountered for the first time. We were fairly successful we ended up with 70% of the delegates who managed to register online using the tools, the remaining 30% had to call into a service desk that would set up a 24 seven service desk where an individual, you still need those individuals to sit there and verify and confirm the delegate was who was who he or she said they were and authorize them in the right permissions. So that was one example where we saw in fact this and since we finished it and spoke about it there's many, many use cases coming up across the UN system where they're looking for something like that. And even post pandemic. Because there's a interesting conversation happening across the UN ecosystem where they want to bring the greater world into those conversations. So back to some of the points Katarina raised. How do you bring in the voices that are not at the table into the conversation. So, some of the senior management in the UN is very aware of it that unless we can bring the common population and we have the tools we have the technology. If they are not welcome to participate. The UN becomes more and more of an ivory tower where governments meet their discuss, but then the common public has very little to do with it. But how do you bring them in, unique technology and you need some of these tools to acknowledge and to know the person is who they say they are. For example, when they're participating when they contribute, so. So there are many many kinds of applications that come with it. The other thing we saw a great use case for is analyzing all the documents, so you in large part to you and generate documents and to Katarina's point, used to be trade documents is with 50,000 words now the 500,000 words right or whatever the numbers are 5000 50,000. How do you go back and analyze all the documents, whether they're related to trade with a related to human rights, go back and say what was each country's stance. What was their position What did they say in the past, what are they saying today to have to go through using even traditional tech knowledge management tools, tools, it's not possible anymore. given the volume of data that exists historically and the volumes of data that's being produced now, which is exponentially. So, we are trying to apply AI in those use cases. And that's where you find some very interesting situations where there's a lot of marketing. So when you look at the commercial companies and I won't name names. They offer AI cutting edge or to do this will do that. We start to put them to test against these solutions and you know what, it doesn't work because, unfortunately, a lot of the tech is built by a certain kinds of individuals, mostly white male a certain age by certain geographies. And that handle certain languages. And in the UN context when you asking them to analyze documents that were written in different languages, with different implications connotations of what was said and and the UN speak that was used the CI falls down. So you have to spend massive amounts of money

retraining it what has been sold to you before you can actually make it practical and applicable and start to analyze these volumes of documents. There's a lot of effort that has to be put in. And that's when we began to realize it's our IP, it's the collective human systems IP that is training this AI, and we say hey it's great because retraining the AI is good for us. But that IP goes back to a commercial organization. Back to the point you are
DONE TIL HERE SONIA
raising Jovan earlier. That's a big challenge, because over time. It's the commercial API's that are getting smarter and smarter and smarter. And we see that within a year. What was free becomes expensive, and then it becomes more expensive right the smarter air becomes more expensive it becomes for us to use, which is why, open source, non commercial models are so critical in my opinion because long term. It will be large corporates who will have the entire world. At their beck and call so to speak. So documents was another area where we think there's applications we are we are starting to see some traction but we're realizing it's a much more complicated uphill battle than you would imagine even with the cutting edge tech that sold to you. The third area we see, and I'll stop at three for now is real time insights. So when you have big meetings, and again climate change was one but there are several others. Human Rights conferences. It's important to analyze the common public sentiment. So you start to do sentiment analysis, not just off the delegates and who's tweeting water saying what what's the average Joe, if you will, pardon my general is is is saying about this year, and and and that gets very interesting but it gives you a very meaningful insights to say, are these going the way we think they're going. What's the average public thinking about these negotiations that are happening right now. And that, again, there's there's real value in that I think, and you need to harness AI it's impossible to do it given the volumes of data that's flying at you real time challenge becomes, you have to use commercial tech. So, to do a twitter twitter sentiment analysis for example, at certain volumes, you have to start being Twitter to say I want to eat all this data and consume it and analyze it. So even though all of us might be tweeting and saying hey it's free I'm tweeting, I don't have to be anything at the other end somebody is paying for it. So, so there are some real interesting challenges that pop up as we start to look at how a as you so I think the many many use cases where to be extremely important to us as effectively. It'll help us do a job. By listening to a much larger population than we listened to today. But we'll have to keep that commercial aspect in mind. Thank you so much for a really great great insights. There is one aspect where which is usually not known, but they always mentioned to Google representatives. The first Google translation software was developed based on the UN documents. And I said that you had this initial investment somebody was translating this you and Dr. They basically siphoned the document you have the Federation in the English, French, Spanish, Chinese Arabic and they basically started developing obviously they have now, much, much more ahead, but there is a real question, how we do serious public private partnerships and the keys to understand what's going on we should not go into the into the let's say sleep or walk by the latest hype as you indicated we should partner with the companies, this is very important they are creative providers of solutions with with clarity, what is a private and public interest, what's happening in Bangalore A few years ago, Google created the asked by Bangalore authorities to create I think mapping of public transport. They use data and then, Bangalore wanted to be like stadium and they went back to Google and say, could you give us a simulation of traffic for our new studio and Google told them. Okay, but you have to pay for it. And they said, but we paid you and it's out of date they said no, it's now, our patents that we're speaking about very serious I would say

on the social contract level and it's great to have you both did your position and in the town to make a reminder that this public private partnership should be made in full responsibility, clarity. And when the understanding what people like you were here the training exercise. What is in it. In short term immediate term and long term. Otherwise we can walk just into the sleep walk into the fog. This is the add on to the sleep work great as a lot of questions I am sure that it can learn can continue with the points I hope we're inspiring some comments and question especially critical ones in the from the audience, but we just move, move.

Still with the UN ICC and Marco, you what was in the plan. What are the challenges and what is ahead of us. When it comes to a and these dilemmas which indicated. Thank you, thank you Jovan first for for having me and it's a pleasure. I hope you can all hear me. Well, yes, Yes, yes, yes not good bonuses. So, um, challenges is good question, of course, and I go back to the quote by Katharina earlier that technology is not good or bad. Challenges also come with with opportunities with new technology there are always challenges, and from the challenges of any new technologies will mature, all the way to the, to the specific challenges of AI, I won't go to the ultimate challenge some authors talk about they are becoming gods and, you know, that's really leave that aside for the time being. But there is one that it's a particular is. It was alluded to as well which is the issue of bias in, in AI so that is a challenge and why is the challenge we were at the conference. Presentation discussion with the UN consortium let's say of UN staff associations. And when the topic came of technology. You know, we discussed the I there was a clear knowledge of the risks of clear concern. You know that those type of algorithms would be used. And, you know, and how what is done to avoid that by us actually becomes embedded into. So that, that is a challenge and it's the word challenge is the challenge of in a way perception, which is good and bad. It's good because it challenges the practitioner of technology to make sure it's stands up to scrutiny. So it must be there. It should avoid it should not be as much, you know, too much in the sense that he will. It prevents the technologies to move forward in the right place. So, there is a balance there. So there is a risk in both ways. So it's good that let's keep the good side, there is an opportunity there, I'm not sure. At least that's the way I see it, many AI algorithm and that's different from AI from previous algorithms. So, previous ways of, you know, previous solutions, is that AI learns. And that makes it qualitatively different than the challenges of previous solutions were actually the knowledge was provided by humans. There was a clear responsibility of humans providing that knowledge and telling the algorithm, what to do so it was easy to pinpoint to the developer of the allegory is not so clear cut down because of the learning element. But, you know, bias is defined among humans as a prejudice and fairness in in science, it's a systematic error. So, if we remove. When this AI learns, I mean I won't going through the history of many instances of bias and when I mentioned my one maybe, which is the 2018 there was a algorithm by Amazon to hire, which was founded will sexist hire more men than women. And the thing is that the learning happened on the existing data existing you know, higher. So, it, reflecting that the fact that past hires where we're biased. So they canceled the algorithm, and I want to make one point that the all of the engineers, they do not want to be associated with an algorithm. They don't want because they felt he was bad the outcome and didn't want to be accountable in the sense, the outcome was part of the learning, not their job to know what they did. But canceling the algorithm didn't keep that I don't know the history in Amazon later but this, they went back to the previous practices. And if they did, wouldn't did the buyer still be there. So what I'm what I'm trying to say, in a sense, and that's. Is that what is

something human, and it's very hard to tell the human HR person you're biased because in this particular hiring process, you know, you, you actually had the or the woman you're hired the you know the English man and not to the, you know, some some other country. It's very hard it's a difficult conversation to have. When it comes to the algorithm, it's, it's a science. It's a systematic error that needs to be corrected. So in that sense, they may not be, you know, may not be work, a workable solution cases. In some cases, at least that you you're turning a human problem very difficult for. And some people say that the solution of prejudice or right places means the fat to recognize that your action bias. So it's a very difficult thing to to handle at the human level, but if we make it a scientific problem, a technology problem maybe we'll have an opportunity to help solve it in certain application, you shouldn't. I shouldn't be replacing all human processes, but in some will turn some problem that exists today of bias into technological problem needs to be solved. So that is you know when I'm when I'm talking about challenging opportunities. So, to a degree, this can be a social robot pedigree, we can we can embrace these and make sure that we we actually, we actually created the, you know, properly. So we care what's coming next, what's coming next is we as the UN ICC we actually hear our customers, and in the sense that we, the solution is needs based solution. So we don't come with prototype or research new technology. And I think it's useful in the context of AI, which means it's some time and the real the real breakthroughs are incremental at this point in time, there are these qualitatively new, new technology One element that is key, apart from what I mentioned is diplomacy, some elements of the support that needs to be done to the to, you know, to diplomacy is high risk, meaning if the wrong information is provided. It's the consequences could be could be really bad. So it's interesting to work and at one point, probably needs to be looked at more widely today there is a proposal about the managing editor risk based approach to AI. So this would be, I think particularly important when it comes to AI applied to specific fields where there's a high impact and again diplomacy in certain cases can certainly be worse can start because of no mistakes than in knowledge provided by these. Thank you. Thank you, Marco for a great overview and concrete examples. One, two of you were speaking I was thinking about two empty chairs. And I was sitting this two empty chairs and one is definitely a that we would ask a I would they would tell us about about in the other way the other empty chair is basically future generations. We don't have in the in the rooms and we discuss climate change AI data. We don't have interests of future generations. We are a bit too Chroma centric or narcissistic. We think that everything is happening now. But things that have been happening in the past and the Israelites will continue happening in the future. And we are we going to pass to the next generation that cultural heritage that we got from previous generations from literature books, architecture, architecture, I'm, it's questionable that will have pyramids, for the next generation. but it's a good question to have in the old rooms at least two chairs or at least one chair. Chair for a chair for the future generation, this may be proposal from the Science Week, that we ask you and to put start putting the chairs to remind us that there are other people in the room, in addition to, to us, and that was a great, great so I feel like moving out of the panel and letting the three of you discuss because you're an average often asked this question about about bias and when we have a great application, and they say wow what a lovely tool and he said, but there is a bias here so don't spoil the party. Let's have the application and that's always an interesting discussion. Cut How is the negotiation with the Andreas. We negotiated but I think the technology is still not still not with us and we don't have Andreas yet. Okay, that's then we will will hear a kid later on, from him. You want just just an update

and Andreas here. Actually, we're in the room physically. He's, he's with us virtually have a turn. Okay, okay, I think we can bring them into the conversation. Okay. Andreas. I don't know if you if the question, the question is about your research and experience on in mediation. My sincere apologies for for coming late, I'm working from from home and Oslo and I did just was just on the way back home I had an incident on the road. And no phone number to get in touch with, but I hope I do have a bit of time left to to share some of my views. Yeah, please. Please go ahead. Did you drive Tesla on a or, I actually have, I actually have. I was driving in a supported car for sure but that was not the problem. It's public holiday here and also today and it's a bit crazy on the street so it's all human factors that were that were these humans are always complicating that. Go ahead please, please go ahead and just good so obviously I didn't, I didn't join the conversation before but if you would like me to speak a little bit about how we looking at AI in peace mediation, and I'd be very happy to do that so I thank you so

Go ahead please, please go ahead and just good so obviously I didn't, I didn't join the conversation before but if you would like me to speak a little bit about how we looking at AI in peace mediation, and I'd be very happy to do that so I thank you so much for the invitation and for for making time at this late moment to still, still bring me into the conversation. So, we, we did a little bit of research over the past years at the at the Graduate Institute of the CDP in Geneva and collaboration with with with partners from Technical University in Germany and costumer at the Kitt and, and we've been mainly working on efforts to understand how and if we could use AI for for text mining applications in support of peace and mediation. And I'd like to just share maybe a few points and insights about about about this research process so I think I'd like to start with just talking about how, in my view, having talked to quite a few mediation professionals and mediators. People look at AI. Currently, and I think it's quite important to kind of demystify it and you've probably done this over the past, 45 minutes already, but, so please interrupt me if I if I repeat myself but. So in in peace mediation I think there is you know it's a it's a very human centered field probably quite like diplomacy and very often mediators tend to still look at it more as an art than a science, something that really requires people bring people in a room and having as little technology as possible and then on the other hand, obviously, particularly over the past few years, also because of initiatives, out of Geneva, I think this this view has changed and there is this question of what AI can really, really do for for peace mediation. But I think there is a tendency to have a kind of very technical centered view and to also think of it is, you know, producing peace agreements, just as we can forecast the weather. In that sense, or you know right writing peace agreements like we're writing like a I might be able to write novels. Today it seems that this is something that is increasingly capable of doing. So, but this obviously this kind of technical centric view is also quite problematic and I just want to say a few things of why I think when we're looking at peace and mediation in the future we need to look at something that I would call it a hybrid peacemaking intelligence and that's very much kind of the integration between human intelligence and artificial intelligence in rather kind of closely knit circles of of knowledge production, and I, and I think the key reason for this is something, and maybe you've talked about this before, is something called context, or that I would call context autonomy. Obviously, not only me but also humans need to know the context. Well, in which they operate and, you know, I'm not a machine learning experts, but from what I've understood is that, at least, the, the, the AI is used in. In, for instance for text mining need to know the context. Well, in which they apply it in conventional ml needs to have, you know, training

data, right, obviously you have other other other other AI approach as well, including neural networks that can operate with with with larger unstructured and uncoated data sets, but at least you have need to have something like ground truth or something that informs your model something that you can be. You can be looking for and everyone who's been working in peace mediation those pieces as well, is that they do not follow a guidebook and, at least from, from what I've gathered, I think there is a clear indication therefore that the AI can be applied in support of peace mediation, with fob rather narrow, because if it's rather narrow, then it can handle the context better, and it can operate autonomously, but this ultimate autonomy will be very much kind of quite closely bounded by, by, by, by, by the end of the humans with which they, it works in in kind of in a human of the loop approach. And I'd like to just quickly flag, two examples and come back to you and see where where you'll pick up the conversation so I've already mentioned that here at the CDP we are we have experimented with argument mining. And we will hopefully do so in the future again, analyzing, basically, either. You know, for instance texts from from from from peace negotiations, or also from from media or social media to really understand how how conflict party positions shape up what interests are there I mean what narratives exists around conflict. There is a small team, I've seen a interesting paper a small team out of Oxford and Warwick that have, for instance used transcripts from peace negotiations, to, to, to, to model conflict party positions and distances between conflict party positions using the bird language processing tool and I'm not an expert on those tools but they have to share to share that particular paper. And I just want to flag that I think these these, these applications are promising but there's you know all sorts of challenges coming in here. First of all, many peace negotiations are are not recorded a lot of parts of the negotiations do happen you know of record of sight. Maybe parties will not actually convey that true positions in a negotiation process. So, in terms of you know you can, I think, worth modeling arguments and opinions but then in terms of you know assessing the value of that information that can be that can be analyzed. I think this is where where we're human mediators are very much asked to to interpret that information. And the second example that I think is quite interesting is, is experienced by the innovation so in New York together with the, with the Middle Eastern offices there. Also I think working on the Yemen context that also I think recently on in Iraq, and they are they using AI for the whole kind of large scale on my focus groups where where where text mining tools and NLP are integrated to enable kind of a dialogue between one mediator and the larger group of participants maybe hundreds, and, and, and there are models that help to cluster, the responses of the participants and then there is something like a voting exercise that also helps to, to understand what of the responses what of the opinions or, or interests that are in the answers are more widespread and more accepted among the group and I think this is a very interesting example because you know it's quite narrow. It's closely integrated with me with the mediation team. And there is also kind of a combination of kind of qualitative text mining, and then some, some statistical quantitative calculation, to understand, you know what what the what the group, or what the population wants and needs a stop here and I hope I'll be part of the conversation for for the rest. Thank you Thank you Andreas it's great to have you back. Well, few messages from underlying messages. Avoid hype context is the king or queen, whatever we hear truth to, to, to use, and be realistic when it comes to the impact of AI and use it in some sort of hybrid smart smart scenario, We are halfway through to our session now we will have a human language presentation of practical tools from from his experience for your team in in in in Belgrade, Anja and others you can stop now here

transcribing and work on the knowledge. Knowledge Graph. And the Kat. I can see that it's very busy in the chat session, therefore after you when you get you can come with the summary of questions for the from the online chat to make the quality of participation in this hybrid meetings, and then we will pass the floor to you for questions into our, our panel for answers. Therefore, we start with Jovan with the video and I don't know you and I can tell you what, what, what is the typical situation. I prepare presentation and I asked you Jovan I have to explain. Two deployments and said, Can we do it with the flags and then he creates a flag recognition pattern a softer in Belgrade than other tools that he has been. He has been using I don't know if he can share the screen maybe from from from Belgrade team that you can see these applications and they are public good, you can access them they're accessible online. Jovan. Thank you. Yes, it seemed to clear your certification. Yes, this is Diplo of various applications. Some of them are using AI, some of them are just data visualization applications but they're all, we believe they're all fun and and they may be useful. So this is application which detects the amount of cars in the flags. The hope to improve later to try to detect shapes and to this point to just can detect colors in your can sort of the flags according the percentage of certain color in the flag. Maybe you know Jovan this point what was interesting. As you know, there are the Latin American flags have the blue and white. Typically Slavic blue, white and red Arab have their own patterns, African flags and it was interesting to see the sort of families of the of the flags or or Scandinavian flags in the. Exactly. It's funny how you come from the percentage of the core of the phone you can even sort NC origins of different nations. So, the second application is between show speech generator of many countries companies. Countries companies is also fun one. You can choose any country and see which tech company is similar to that country's GDP, we compare revenue of the company with and try to find the similar similar GDP of the contrary, or you can even choose to compare historic values of GDP, with historical resolve of companies governance and see how they changed to the history. Speech generator is the app, which aims to help diplomats writing speeches, you can select various topics and then go to the delegate speech and by using those sliders on the side you can choose the sentiment of your of your pricing and get different, different texts, but we have to say. They're also experts work on these texts so it's not fully AI generated, maybe just do in here. There was one International, how does international existing applies to cyberspace some countries say modified me or directory direct way and this is a big issue when you go to the UN GGE negotiation on the Open-ended Working Group. Now I won't go into acronyms but people spend weeks or months discussing how it applies international law. Therefore, what Jovan said, the experts plus the system codify that and put, and you can see and later on. There was also if you want to be closer to certain country you can you can compare it to them, but that's the main point in Diplo we are trying to deal with, augmented intelligence so we've tried to augment experts intelligence, with AI we don't want to compete artificial intelligence and and artificial and expert intelligence, but to combine them. Maybe we should change the name of the world, to the augmented intelligence. We can do that. But it's a, it's very important because when you try to put into the work on the organizational level, you start to deal with a bunch of practical problems which, which later on when into really philosophical problems. From what kind of documents you're using, what is the domain of the organization. For example, it is much harder to use some AI to, to, to detect sentiment on the diplomatic speech, then detecting segment on the review of some product, it's, it's really completely, completely different thing. And how do you deal with. I mean, the main thing you want to do with AI is first to

get to give your sights and collect information from the bunch of data, which hurts by third in other different various types of documents to send books as a Data Sandbox is a tool for the, for the normalization if still Anja is sharing this with us. Second, please. Okay, that's that's an interesting tool we have a country the data sets. UN, World Bank, and you see how you compare them how we started doing it during the COVID crisis and see which countries doing, how you compare the data sets and then you and each game with interesting ranking of the countries and single in the red red colors or deviations. If countries are no points, among top 10. Then you suddenly see the country's 68 on some point so the pantry. And then you, you start asking, What is the reason. sometimes it's a trivial reason. Sometimes it trigger you to do research, but Jovan you made your record, so so you just compare countries on the various features recording so you can see how certain countries are doing in certain fields. Are they outdoors. By some standard we use a different auto detection method so you can see the guy got the fields are actually the fields on which someone should pay attention to and, and as what's happening by read on this position. So, getting just finished with the, with the debt problems guarding organizational giving information so. One way is to confirm that information into that unstructured data into some different types maybe vector database or or knowledge graph or inverted index matrices. But you have to concern them, and then to be able to get again, specifically more specific information, and then when you get information you step into the other universe of problems, how, what would they do with that information. What kind of algorithms can help you generate some knowledge from the information generate some text and how to control that negation. So, this is what are we going to try to experiment here at Diplo we are going to explore all these approaches and combine them. So we use both vector databases knowledge graph databases and inverted index mattresses and try to end. Experts as a fourth leg, and try to, to find the best way how to get here. Yes, thank you, thank you, Jovan and one one when you were talking earlier it reminds me what, two of you mentioned, which is something is useful when you don't have a lot of funding and you are not academic institution that you are then needs driven. We have to develop all of these tools for practical needs to explain to diplomats, what does it mean pattern recognition on the example of flex. That's, that's basically this is a simple explanation or to do with this data sets, or to do is be generated. Therefore, that's an interesting which I for a long time I thought why we don't have this huge funding of a company's or universities, but to be the hand side without donors in the room. Quoting me a lot. We can say that could be sometimes advantage. Life is paradoxical you know disadvantage turned into advantage in the other way around, but that means that even approach, always give you sort of reality check. This can be done, this is the this is there will be a few other applications including the latest one on the X ray or international organization in Geneva analyses of all official documents are all International Organization for digital issues that we are preparing new issue of the Geneva Digital Atlas, and they will be scanning, how the how the world health organization that works with the ITU with trade through the analysis of documents that are not what they think. But let's see in the documents what it is and what Sameer you said they probably can can compare notes and work with to get on it because you're doing both so much on the document analysis. Okay, Kat. Let's now move to the, to the interaction with the first online audience and then you here in the room, what are the questions capital comments. So as I said earlier, we had a very very interesting and lively discussion in the chat. I'm going to go in reverse chronological order so one of the recent points that came up is very interesting from Ginger Paque so common distinction when we talk about AI is between augmentation, and

automation, but ginger brought in a term that is much older from 1956, and the term is intelligence amplification which comes from the discussions on cybernetics and intelligence amplification is perhaps a very useful term when we talk about AI in diplomacy and mediation, and perhaps less, less threatening to them. We then had quite a quite a useful conversation in terms of the social contract of about AI so who develops the applications, who owns the applications who owns the data. There were suggestions that it should really be the UN developed such applications, but then also questions about how other countries and regional organizations could get access to them, and questions about basically who owns the data kind of mirroring. A lot of the points that we raised in the beginning of our conversation. One last point I want to bring into this is the question of trust in diplomacy in mediation, and basically that we cannot get rid of personal interactions and just going to read this very quickly. Former US Senator George Michael said that his success in Ireland was the fact that no matter how little progress might have been made. It was his dedication to fly to Ireland. Each week, that builds trust. So basically building trust through personal interaction but also perhaps in this day and age emphasis on personal face to face interactions flying to Ireland. Each week, I'm going to stop here. Really interesting comments that I would like to, I think would be really interesting to hear reflections from the panel on. Would you like to take the second to the theater wearing now he says that the. In addition to online moderator, and the see what are the what are your comments on the on these questions. Well, in terms of trust and personal protection I think also basically Miriam what what Andreas said in his intervention that not only to diplomatic immunity as mediators feel like that, the policy and mediation is more of an art than science, and that the human human aspect should take precedent that definitely needs to be emphasized, and I think technology is not here to replace that in any way shape or form and it would be dangerous to assume so. And I think, building what under us it would also be dangerous to assume that we can somehow. Calculate peace or measure piece or calculate an ideal negotiation outcome. The second point regarding who owns the data and kind of the UN as as the place to develop these tools I think that's crucial, especially if you think of things like the digital divide and kind of inequality between countries when it comes comes to digital tools. So as we enter this era of artificial intelligence. Many observers have said that this kind of inequality is just going to increase. So, it's a huge question, if you look at traditional diplomacy, have some fun ministries have access to these tools for forecasting for preparing deployments for negotiation using artificial intelligence tools, this very well. Very likely increases inequalities between countries, and one place, we're, this could be mitigated is of course United Nations. So, yeah, that would be my business and I think that's also point you make a lot Jovan think you will get back to the outer police around you and I see many questions are related to the UN and them, but first let's see with under Andreas. We have two examples from history, Vienna Congress 1814-1815, a lot of fun. The Austrian paid a lot for the, for entertainment in Vienna, and they made the reasonable a good deal, which hold the global peace for almost 100 years you have, fast forward you have a post for civil war website Paris negotiations. Scientists are coming statistician they're measuring everything they're measuring reparation. And then we have war on the 20 years later even unstable period. Anything on that lesson from from two important negotiation in history, and their impact on our wisdom with using of science numbering and calculation what what Kat mention big reflection from you and then we are moving to the other comments here in the panel, and to our audience here over to you Andreas great examples. Jovan and really, I think what you know what they make really really clear is that we shouldn't fetishize

technology, I think there is you know and science for that matter. It might not necessarily be the right calculations that AI or AI supported science is doing, or it could be the after party or a party or, you know, other other means of other human means and social political means of achieving a peace agreement. You know, I think, you know, the Peace of Westphalia is also very much built around in our cultural norms that have emerged after. So it's not only the peace agreement that really makes it all made it stick for, for a long time and I think this is why really really really important to reflect also on the role of of politics and society and culture, and all that, I'd like to just, if I may just make a very short insertion on the question of machine autonomy was very short augmented or artificial intelligence I think these are important discussions, but I think what what's what's really key for us is to get to a sense that we understand we you know pieces mate and socio technical systems where machines do have increasing autonomy they play increasingly autonomous roles here and there, and one term that I think helps me in my studies and maybe also helpful for others is to think about distributed agency so you know if you think about a peace agreement been reached there's you know lots of agents that are involved in that lots of factors that influence lead machines, and artificial intelligence being increasingly one. Now I think what's important is to get a sense of what that agency is that AI has, and what impact it has on the process and and very just to say. So when I talked to AI scientists or computer scientists about you know how they would for instance model, you know, arguments narratives opinions etc and written texts. Obviously the models that are possible to do might be different from my sense of for the narrative or an argument is of for the narrative or an argument is right so I think it's very important to also get a sense of this kind of subtle power that that these models might have in shaping our view on the world, and therefore our capability to make peace. And I think that's worthwhile, having having more and more, more discussion. Thank you. Thank you Andreas to two points we're getting back to our panel with two key questions to submit you can decide the question who owns the data. What is the role of the UN and the question of inequality which is emerging, can we expect some sort of ai, ai divides big divides and that reflection that and I'm inviting our audience to think about. for discussion. I'm sure they will be excellent questions. I'll try and tackle them and then mark will jump in with any additional thoughts. So, the question about who owns the data. I am biased I sit in the UN. So I think there are certain kinds of data that should stay with the UN, just because of the fact that to me for the very first time we created an entity like the UN which spans the globe on hundred 93 countries our Member States, and it has accorded certain privileges and immunities to do and so what that means is if we hold certain data. Nobody has access to it or everybody has access to it depending on how you look at it so it's not privy to just one country or one region. So for that reason alone I think especially if this data is being used in means in ways where you are saying, I will train my with this I'll drive some intelligence from this. It needs to belong to the world. And I can't think of any other safe holder better than the UN, but clearly I speak with the vice him in the human is positive vibes, it's positive. So, so yeah so so data, I think, UN could be a great repository for holding that data. Along with that, to me, is, who owes, who holds the IP or the intelligence right. I think that was part two, if I'm understanding, and then that becomes very tricky. So in some of the more cutting edge cases where we were applied this. It is contentious, the commercial companies clearly believe, part of it is their IP and where do you draw the line for said this was your baseline deck, this is what we have built on top of it so this becomes the UN's IP is very important because otherwise if. And I think it kind of touched upon that in your earlier observations john that the public private partnerships we

need to make them stronger. And as a public entity, we need to realize we actually equal participants and equal contributors in this so we have a say we should not just take what is given to us and appreciate it saying you the private sector is giving me x for free or exit certain discount Thank you very much. We also contributing into that part. So we need to draw the lines in my opinion a little bit better. So that the ownership is more than the public goods space. Otherwise this digital divide will absolutely widen over time. And and you already see this acceleration which we saw in the pandemic with a large tech giants, just grew massively, right, you can see that acceleration happening and that will continue with, with the IP and the ownership that they have. It has massively, in my opinion, massive implications. So we need to make sure that IP is retained in some kind of a public, private, collective, so that other countries can benefit from it to who may not be as as far along. I think the SDGs panel which you are cheering on High-level Panel on Digital Cooperation that was one of the key highlights that you flagged there is, how do you bridge the digital divide. I think it's one of the new problems that the UN needs to have a point of view on, like we did with everything else in the past, including trade including human rights, including health including, what have you. This is one of the new frontiers where we need to have a stance to said, this is how we bridge the digital divide and bridge it. This is how we build a commons collective. from it. I know I'm speaking bit in hypotheticals but I am passionate about it I think that is essential to break the digital divide. Otherwise, and better forecasting 20 years 50 years from now, you will have large corporates who decide where the world is going, and who the rest of the world will not have much of say about it. Thank you so much little comment but you inspired me on discussions that we had the during the COVID time when we ask the simple question need to work together to and panel. When you go to the public meetings of the UN you go to the on premises privileges, you have privileges immunities when you go to Parliament to go to the parliament building, but you didn't call it time you were going to the, to the corporate platforms, whether it is Zoom, or Microsoft team which was a great service it provided the continuity, and it was excellent. But there was a question, both symbolically and practical. Is there a need that, as UN has its own premises here in Geneva, New York or Indiana. Should we have some premises online, that's, that's we had, we initiated that discussion but this is also point that we may reflect more even on symbolic level, do you go to the place where you enter. Do you do that companies can contribute, like countries that are contributing stature here are the room in the New York, from Denmark excellent, excellent design, but it is a major issue especially developing countries are concerned about it. And I've been hearing during my work at the UN panel. That was a major concern that in addition to functional approach let's do let's don't, we don't care if the cat is white or black but thanks you're being said it's important that it can catch my sis, but then people something Wait wait wait, the color of cat may matter, especially in the long term, sort of capturing what Sameer indicated I'm putting it blunt but it is an interesting dilemma. What is your take on take on it and then we move to the room for your comment is not it is extremely important topic just what maybe a couple of quick things one is that, You know, our to when it comes to innovation and new technology there is the occasional innovator, that may be outside of the context, outside of the companies in less fortunate. You know, countries but there is normally maybe just at the beginning and it could be few individuals the outlier, but really you need the digital divide is there, it's very real and these are more of the exceptions, you know, even in during a time of innovation. So, it is very real and I think that the member states are very important role to play. And I'm saying that because clearly there member states that you know that there is a

support for the own economy and the companies in there is a support the UN, and maybe different people have different support so it's a it's an important element, one point the, you know, that they should be right view of the greater good. And, and making the right decision, including for the ownership of data. Today there are a lot of consortia around the AI ethics that are driven by commercial companies. So they're, they're coming up with their own rules of conduct, which is good data is produced they're useful thinking, and it's a contributing to the discussion. But clearly, it should be it should be really institutional, it should be an institutional decision, it should be at a broader discussion and agreement on what those principles are there are signs, there is the UNESCO principles, there is the EU proposals. So they are signed their institutions are waking up to that but the I think it needs to happen sooner than later. Because this. I mean, commercial companies clearly are working with data and the work today is happening without that construct of clarity on where the ownership lives therefore it's. By default you know it's it's only. Thank you. Thank you, Marco. You want to update us at the end with this knowledge graph that we developed it now going for about 10 minutes to the room. Any comment question, please. could you introduce yourself quickly. And I have two questions. The first one is, is information that fits a narrative conflict, and that it is hard to see what it's what is causing the microphone and the interest behind the positions that the partners are there was wondering. Interesting to start with your part, and fees that is peacekeeping, because I have heard the angels and the communities that are part of the fire monitoring the notification operation processes. that. The second one is. Thank you. Please enter the fire, please be understood. This could be taken into a form to start on it. And could you repeat that building us can be transformed by somebody to initiate a word. Okay, that's that's real philosophical and let's let's let's I'm sure that the Sameer and Marco When will you have a question on this side the third question over there. And the fourth fifth My God, is really, it seems the three managers that you didn't fell asleep during this session, and Boris stay till the end of the session which is not typical, you know, I will pattern shows that he lives in the third fourth of the and you want. Jovan sorry to interrupt him from online disciplines have a hard time. No, no. We have no microphone, the first question was on the peacekeeping on the use of buttons and data. The in the answer you will repeat the question but now we have microphone could introduce me just now. I like your Jovan and your suggestion of having one seat for young people. But what about having another one for people that are not not at all on technology that for me personally the digital divide, we are discussing here so I can see that they're talking about I'm thinking about this side, side on part of the population that is not technologically were or reflect on what Sameer says about evaluating the source of our confidence based on just the tweeter, we're not putting too much attention to motivate us on developing on developed countries that we use Twitter. And even in developed countries on young people, instead of having, you know the feedback of broader broader part of the world. Thank you, excellent questions. Older people bias in the meeting. Thank you. Thank you. We, I forgot there were two hands there. Yeah, you are recording the questions is getting really. Everyone, so my name is workers, the program officer of India Science Policy Fellowship Program. So my question is about the possible malicious use of AI in diplomatic practice thing, we can create fake documents, videos, speeches and so on, and many other possibilities with the many other negative users are possible. So, given those things, is it required or necessary if not now maybe a future, having some kind of rules and regulations for AI in diplomatic practice. Thank you. Do the rules. Very good question militias us Kat you can hear us now. So it's still a bit challenging. So just a quick repetition of the question

would be good. Not we're going to repeat the questions when they will be also just to do economy of time because we have a few minutes but please watch out a bit. My name is the UNINTELLIGIBLE I work as an advisor for the GCC delegation in Geneva. Maybe my question is more to Mr Sameer over there, regarding the use of AI in diplomatic practice. We spoke of real time insights for example, information that is provided in real time to negotiators. We also spoke about information or technology being provided by commercial providers. And with that, As Marco mentioned, there's a high risk that this information might be wrong or any case might throw this negotiation or take it sideways so how would the UN. What approach with you and us to mitigate the risks, generate trust and convince the delegates of the diplomats at the negotiation that this is software or technology we're using trauma commercial provider that you can trust and that we can build on to, to proceed with the, with the talks. Thank you. Thank you. We have one more hand over there and then we are moving on the on the other side, have to be. My name is Nicola senior community engagement officer with mo based in Germany. So I was just looking at the news item from maybe about 10 days ago, which says NATO allies have created this new defense innovation accelerator for the North Atlantic or Diana. And one of the key areas is AI and quantum computing, among others. So we just talked about digital divide I wanted to understand how does that reconcile with multilateralism. Thank you. Excellent question. We have a question over there. Hi, thank you for millennia from Costa Rica as well but a scientist not a deployment. First of all, good luck answering all these questions. Secondly, my question is to Sameer and it's complimentary to what Pablo was asking about reading the perceptions of the public from Twitter, or news and passing that through AI, in my experience at least, I see that the impressions on those social media platforms, generally tend to be the most extreme the most angry the most toxic. So if AI was sitting on that panel in that empty chair, would it be reading us collectively as we are, or would it have a really dramatic extreme perception of who we are as a collective think you think it should be should you break the mirror or accept what we see in the mirror. Oh, k the in my culture, breaking a mirror brings better luck I don't know about, about other other cultures. Great. Thank you. We have another button nice evening deploy usually I'm well known for bad time management, but now I'm sure the panel is going to help me to, to, to challenge this pattern. Because we have also few more minutes for Jovan to show the Knowledge Graph from today's session peacekeeping from first question from Costa Rica, the question of the using the patterns chairs for older bias malicious use real time insights and bias, Diana AI for NATO versus multilateralism editing public perception and what we will do with empty chair, at least one future generation we will basically be tolerant because we won't be around. But AI would be more difficult. Thank you Let's try my best. So, the first set of questions that on the bias from the internet sorry and this was on Twitter I think it was that your point oh sorry. Oh, peacekeeping Yes, yes, reparations monitoring peacekeeping, I think you're right. That's a great area to start from. I think we support the entire UN system. And I can tell you that the UN system is a reflection of the world that created it. So the UN is not homogenous, we don't. We're not consistent in what we do, how we do things for what technology we use. So, each organization each entity is choosing tech for themselves in lots of cases we come into the picture we assist them we support them at you and ICC, but there is no standardization. So I am pretty certain, the Secretariat which drives the whole agenda of peacekeeping and monitoring and things like that they are exploring use cases as well. I'm not privy to them, but absolutely that's an area to explore a new right i think that may be an easier to start tackling things from, and then build from there. And then, sorry the second

point was patterns and I wrote something which made sense then now. Yes, yesterday. Absolutely. I think, in the middle of the pandemic we were having these discussions. And I was involved in meeting with diplomats and they said the same thing that there was one particular country where they said we wanted to use the pandemic to go digital. So what we did, did is we started publishing. All of our official decisions documents online immediately to say see where we can go digital we can share it with the public. And within half an hour, all the documents were forged different version of it which looked real was published, which change the status change the point of view. And that started a whole media outburst. So they said it's not just good enough to be agile and be digital and start publishing what you have to be prepared for this onslaught of fake news or whatever you want to call it, which will start to distort the conversation distort the decisions you're making. So it's very real. And this is just simple documents, but if you start using AI, you could really do harm and back to Katarina's point you can use for good or bad, unfortunately they're always actors out there who are trying to distort, and it's a means to an end, whatever the ends might be. And I'm kind of tying into the points that was raised about nature, for example, we have an older people and bias we have malicious. Yeah, please. But NATO. This is. I'm an army brat My dad was in the army. But I feel strongly, we as a civilization are human beings we spend way too much money on building weapons and rolling out the latest cutting edge tech and rights of NATO's using AI. There's a reason for it, of course, but not even 100 of that goes towards peacekeeping and mediation and reparations and the spaces where we could actually do some real good. But, so, yeah, I think we could be doing a lot more but we unfortunately don't as a race we tend to focus on with some of the conflicts that are happening now and countries are donating billions. But those billions are for weapons. And when it comes time for Reparations all of a sudden the process will be much tighter. Unfortunately, and that's just who we are as a human race. So, silent population absolutely and then I want to clarify there were two points, raised on Twitter. Twitter us as shorthand for looking at social media, and we looked at social media. Just FYI, during some of these meetings, just to understand what's the public sentiment, it did not drive any of the decision making at the meeting itself. What we did do is for the actual participants who are hybrid, so you had participants from hundreds of locations around the world who are participating, we were doing real time sentiment analysis of the actual live participants not What does what the average population which was obviously one very biased towards certain parts of the world more tech savvy younger, and also more extreme in the opinions, that was, let's monitor that, but this was what was the real meat of the real participants was what was driving the conversation. So just to clarify, and then that's an open a can of worms to say, should you look there, look under the cover or just leave it to said this is more festering worms and everything else and let it be. Not sure I have a good answer there. Tech by commercial providers, I think somebody brought that up. Long term I think we will need those public goods public digital goods is my opinion, and I may, I'm not correct half the time Marco works for me He knows I'm wrong, and my wife will tell you I'm wrong five times a day, at least, so who knows but I think we need. We genuinely The world will need public digital goods, because that's the only way for us to change the equation, somehow, somewhere, it could very well be the commercial entities that are willing to make a public version of public branch, if you will, of the code base that is designed for us by the likes the UN and NGOs and so on. We need that. And I think we have done the most was the points not occur you agree with everything. Absolutely. Please, yeah. There was one malicious use I think you asked if there is a need for conventional. Maybe you can. Yes, absolutely. That's a

very interesting one. And I think that should be that that should absolutely be objective, in the sense as I was referring before, right now we have the these ethics, you know, papers in agreement that are run by commercial providers, we should really be be going going beyond that. And again, I refer back to the EU regulation which is specific is looking at the use of error regulating the AI particularly the high risk AI, and the iris, essentially, in in the concept will have to be augmented meaning they will be always in a human is not finished the, the law, that the order the rules that they are working on. But the idea is that these hierarchies will always be augmented the risk will be defined in based based on the impact that will have on the stakeholders in the people that will be affected by the effects of AI. There are other elements but that's the key element. And if there is key. There are different levels of risk there will be even unacceptable risk certain AI will be forbidden by the law. So simply you can't run that AI, you can try it fakes you can run, so that's outlawed, for instance. Certain types that will be dangerous, I guess, into that realm will start to be the kind of weapons weapons. Some of them I'm not sure if they will be within the acceptable within some of them within the acceptable but always with human in control. So we are mentored rather than, you know, rather than fully, fully appointments. So that's in the works again, EU is going forward. I think we need more wider so we need the UN, and there is there is. I think the Secretary General, in this roadmap Digital Roadmap you mentioned explicit there is a requirement for, you know, for discussion and decisions around AI specifically, and, you know, rules accepted by everyone around the AI. So that's a you know that that's what he's absolutely need don't think there is any way around it. And it's needed sooner rather than later. Thank you, Marco. adressing Katarina people from dress that are standing in this position, business I'm going over the time for a few minutes, the body language is clear Jovan finished it as soon as possible. Therefore, if you want to save me not to be declared persona non grata. Please. Please. But if you don't mind, we'll, we'll pass to your comments or have them extremely quick. And then we move just for last few minutes I'm sorry Jovan I wanted to squeeze your presentation of Knowledge Graph in a few minutes. Finally we do Kat and Andreas that we follow up via email for any question from online audience. Thank you for saving Jovan, what, what is the knowledge from today's sessionOk we created this knowledge graph, my colleague Anja will share the screen and explain how it works. You shouldn't expect anything perfect but it's interesting to see what can be expected what kind of knowledge can be extracted in almost real time from from some more disturbed computer usage so Anja please if you can explain what I've seen just between the 40 minutes of our session yesterday, you will have after the session for the full session. Knowledge Graph Anja over to all Thank you. Can you hear me. Yes we can hear you. Great. So, yeah, we created the knowledge graph, and before creation of this graph, we had to extract is to extract name entities, and we done that. By using transformers, we use several technologies like spacy hugging face neo4j and haystack, and we tried to extract the name entities. After that, we added to our pipeline core reference part which helped us to create those links and afterwards to create triplets and to create our nodes. we are using, and some external graphs that we are using for our queries like Babelnet DBpedia. I saw it yeah it's here. Knowledge Graph cat Horner, as well as some of the topics that are mentioned like AI cybersecurity, our data lab. And so, and here is as well. The full node. And the thing that we wanted to do, to enrich our knowledge graph is if some of those actors names the topics exist on Wikipedia, to be precise wiki data, we added q tools. So, there are some good findings and some that not that good. So for instance for AI, I can just no good just enlarge slightly on here because I don't know if he's my eyesight but I just see what you're telling us

but to have a chance to read. Okay, now he's much better Yes, okay. Okay, sorry. Yeah. The thing was, I cannot find it. But yeah, so the thing was that we tried to enrich our graph with Q codes, and the thing was that it can be perfect because it's not done automatically so we do fuzzy search of the topic or the words of the node. So for instance, I can just now stop sharing to share another screen I'm sorry. Here, for the, I'm not sure if you're seeing Yeah, for the data, for instance, it found with note, can you see this week later, no no, we're still finger know the same. knowledge graph. Maybe now I can see. Yeah, that's, that's good. Yeah, So for the gold for the artificial intelligence, it's found a good Wikipedia page, but for the different organization, it found the American DJ so we have to change the name of the organization. You put 20 years of career into the Grand Marshal. And this is just one part of our graph. And here we tried to record it in a bike whole graph and it's huge. So we just wanted to show. This is our whole graph, and if it has 70,000 nodes. So, we linked the things that you saw sorry. done while you were talking and the other one is here, here as well we use a transformers, and we've done, zero classifier, because we didn't have enough time to do some fine tuning of the models that are pre trained. Zero-shot-classifier is trying to classify the inputs that we gave him the best he can, because it doesn't have any fine tuning. So you can see here the most addressed issues are showed here, it's not perfect, and with some fine tuning, it can be better, but I think it's quite good word called with most frequent words, most frequent known chunks names and entities as well. And here are prominent verbs with adverbs. So, this is the cube. Thank you. Thank you. And yeah, that's that's that's great, and we we try to decipher the map but we trust you that it is good and comprehensive, but just to, to, to, to, to, to add to that is excellent presentation.