>> Hello and welcome to today's webinar emerging tech trends in libraries. Laura is the library service manager for the Ohio public man -- library information network. She has been doing web development and design for over 15 years in both public libraries and as a independent consultant. As a former children's library and she enjoys bringing the fun of technology to audiences and giving libraries tools needed to better serve virtual customers. I'm happy to introduce Laura.

>> Thank you, Mary. Hello, everyone. I am impressed at the geographical spread of this audience today. I am stunned by how many different places people come from for these. We have Michigan, Canadians, wonderful. A good number of you have seen one or two of these before in the series. This is part six. If you have never been to one that is okay we do not discriminate. You will not be behind the curtain because we talk about different technologies in each one. Let's take a quick look at what today's agenda is.

>> For those who have been here before you know I have my googly eyed reminders. We will cover that first. For those who have not will get it. We are going to talk about wearables. I have talked about wearables in the series before. They are evolving so fast that they warrant another look. We are also going to talk about interactive content and how that is progressing. We are going to take a look at every day AI or artificial intelligence. Lastly the realistic takeaways of what things you really need to pay attention to and went and you can put on the back burner for a little while.

>> Let's start with my obligatory nucleotide reminder. What this is, my asking all of you to remember before you run off after this webinar or if you are a ministry during you say to IT this is cool we have to do this, do not get googly eyed over new and shiny things. Remember that every new technology you have to introduce or choose to introduce into your library requires you make a business case for it. Which is a scary word, right? What that means is you are asking critical questions. Why do we need this technology? What problem was off? Sometimes it can be easy to be Lord into -- only herd into -- lured into something. You get caught up in competing with the Joneses mentality. I'm going to encourage you to think critically about everything I am talking about. There only one or two things that I'll will say yes you probably to get on this particular bandwagon. Most of these things are coming down the road towards us. This is about emerging technology not about things you have to get into. Speaking of height, some of you are familiar with this. This is the Gartner hype cycle. This is not a bell curve that shows the progress of various technologies rather it shows the progress of the hype around certain technologies. We will talk about a couple of these today. It is interesting the way it is structured. It starts out with the innervation trigger. It goes through a peak of inflated expectations down the bell curve to the trough of disillusionment. The enters every day life in the phase and scope of enlightenment. At that point those things are no longer emerging. In terms of their hype. This is the press they are getting not the progress of the particular technology. That has nothing to do with this hype cycle. What we talk about Josh are talking about today is mostly going to be at the top of the bell curve. Some things are at the bottom. Why the pitcher of grumpy cat? Because I am convinced that grumpy cat learned this expression from every library IT person who had an administrator come after a conference as saying we must have this thing.

Remember to keep those critical questions in mind so you do not alienate your IT people. Sure you have a reason for doing these things and that you can support them.

>> Also, I did not mention but I like to communicate with people in the chat. I am good at keeping one eye on the chat and during the webinar. I do not mind interrupting myself. If you have questions or comments about anything I am talking about please put into the chat. Even if it's not aimed directly at me there are a good number of people here. You can also learn from each other and you are experiences with these things. Feel free to chat. If you don't want to listen to me that is fine. Do it you're going to do. If you want to talk to me in the chat I will also keep an eye on it. Find people have lots of interesting things to share. Having said all of that, let's talk about wearables.

>> Let's talk specifically about how they are evolving. Let's define what a wearable is. A wearable technology or device are electronic technologies that have some form of communications capability built-in. They are incorporated into items of closing -- clothing or accessories worn on the body. A lot of these devices can perform a lot of the same computing tasks as cell phones or laptop computers. In some cases wearables can outperform those devices entirely because they are more single-minded in terms of what they do. Generally they have some form of communications capability built in. They allow the wearer access to information in real-time. They tend to have local storage or data input capabilities. I want to look quickly at the evolution. We tend to think of wearables as a recent phenomenon. You may be surprised to find out that they are not. Wearables have been around. This is a Abacus necklace. The first one came around in the 1600s. That was the first report wearable. We probably don't think they are because there were no electronics in. Did anyone own one of these? I did not. I was not old enough. They were probably expressive.

>> Mary said her brother had one and Patrick had one. I think my dad lusted after these but they were expensive for the time. Virginia said her school. I remember getting my first digital watch. It was not a calculator watch. The first calculator watch was released in 1975. It became popular as a tool for science geek's. It was considered a early smart watch. It had a pretty good heyday through the 1980s. Even though the popularity went downhill a lot of companies still produce these. You can go to Amazon and Walmart and type in calculator watch and come up with the modern-day equivalent. We went from the Abacus to the digital watch or calculator watch. Then we waited another little while and we got Google glass. That came around in 2011. It was the first prototype in beta. I'm going to guess most of you have heard of Google glass? Please Davis are now in the chat.

>> Everyone knows what it is. It was based on military research of headmounted displays that started back in the 1990s. Google released this kind out to the nerd audience in 2015 but was not officially -- it was not released to the public until 2014. It originally got a lot of criticism and even legislative action. There were a lot of stories in the news about people bringing them into news theaters and so forth. Safety concerns. On January 15, 2015 a year after was officially released to consumers Google announced it was going to stop producing Google glass. It was the next big thing and a big jump from the calculator watch. Things have continued to go on. Now we have these. How many have a fit bit or Joplin or one of those? There are a lot of these. A fit bit is not the only one. Everyone has one these. The fitness wearables are familiar to most

of us. They probably made the greatest and road as far as consumers are concerned. These are not a big deal anymore. If we see someone with a fit bit or job on all will not be freaked out. Things have continued to move. We're talking about the evolution. Lots of things have become wearable. Some of what you may be aware of some which you may not.

>> We're going to talk about some of these today. All of these are forms of wearables. A few we're going to talk about. Things we may not think of in terms of wearables but they are out there. They are evolving.

>> This next one is a connected shirt. The idea smart clothing is not a new idea. The company polar is going one step further. They are focusing on team sports. They call this the team Pro shirt. They plan to sell the shirt in bold to sports teams. So cages can see in real time how hard their players are working out. I almost foci for the players. The data is shared where -- wirelessly to a compatible mobile app. They have not said how much the shirt is going to cost or whether a version be available to consumers. It will be available for teams next month. Sports players are being paid a lot of money. Their performance matters and now they will be monitored. I think this is interesting and perhaps on the creepy side. Smart clothing is not a new idea but the textiles have been around for a while.

>> There are all different iterations of that term. Fabrics have been around for a while to monitor your health and guard you in case of danger. They can measure the chemical mixture of your body fluid. These are textiles that have electronics interconnections woven into the fabric to make another kind of wearable. You can get simple computing devices as well as large complex devices. This goes along with the polo shirt we just saw. One example of this coming down the road for consumers is a joint project between Levi and Google. This is interesting. This new project makes it possible to leave touch and gesture interactively and any textile using the standard industrial looms already available. Maybe closer furniture can be transformed into these interactive surfaces. They integrated their technology into a commuter checker jacket available this fall. It is designed specifically for urban bike commuters. Please go to the URL and you will see a video of someone using this jacket. It is interesting. It allows the wearer to control the mobile experience and connect to a variety of services. Like their music or maps. Directly from the jacket. This is useful this will be released in the fall. You will see more partnerships. This is the jacket talking to the smart phone. All -- talking about smart clothing. I am not a fan of these ugly shoes. It is a interesting idea from a company called resort attack. They have two different versions of the issues. Virginia says that reminds me of the fashion just pay her with Intel based on the audience's twitter request.

>> That's interesting but I don't know if I would want to wear clothing dependent on people's twitter request. Neat concept. I will have to find a video that is interesting.

>> There is two versions. One can change temperature so you can have warmer feet and the other changes the height of the heel. The adjustable heels range from 1.7 inches to 3.1 inches. That seems like it would be every woman's dream. You can push a button and feel your heel go up and down. Great that there is an app for that. You're looking at the ones that go up and down and they are not exactly shoes I would wear. Especially for \$300. They look like an exaggerated tap she. According to reviewers they feel heavier than most normal pairs of heels. Not to mention that your high-tech high heels have to be charge. -- charged. Finding a micro

USB port on the underside of your shoes may be odd. That is only for the ones that go up and down. For the temperature shoes will those charge wirelessly. Vortex says the shoe charge less about four days. Interesting. Applicable libraries nobody shows people are starting to think differently about wearables and what kind of wearables and what they do. As we progress further down the rabbit hole now we are looking at a new kind of wearable. A group of PhD students from MIT lab partnered with researchers from Microsoft and came up with sums consider the ultimate wearable. That is a temporary tattoo you can turn into a touchpad. You can control your smart phone or share your data using communications. It will be presented later this year. The technology is called duo skin. You can design a circuit using any graphic software stamp out the tattoo interactive. Anybody want one of these? Angela so yes she will be first on board. We have a group of volunteers. This will be cool. Then you will not have to buy -- by Levi's jacket. We are seeing wearables now. Yes we see the expansion of the wearables in the sense of traditional things. Now we're seeing this explosion of things that are not traditional wearables.

>> If you have 300 bucks Wendy they are yours.

>> Living in cold climate I totally agree but I'm not a fan of the shoes. When they start putting them in boots I would want to where I will be there. First in line.

>> We are looking down the rabbit hole -- hole but take this into account. Research says by 2021 sales in the US will reach 9.8 billion. Almost 10 billion. Smart watches will account for more than a third of those devices by 2021. What that means is by the year 2021, which is not that far from now, nearly one in three Americans are going to own a wearable. Maybe they will all be fit bits. That is a lot of people with wearables.

>> Another thing people do not often group is under wearables. Devices like these. I think I have talked about these in a prior webinar we talked about virtual reality. Here is Google cardboard. For those not familiar it is a card toward the viewer with two plastic lenses. Cost 15 bucks. Google will give you the plans to build it yourself for free. They are cheap and you can use a smart phone with them. You also use AVR app and get a VR experience cheap. Schools are going to see a surgeon wearable tech over the next five years according to the report published by researcher markets. They are expecting that growth rate to be 46% per year. Part of that is because teachers are always looking for more interactive ways to teach. This is not an expensive way to do it. We are only seeing experiments conducted by schools that see the advantages of wearable products. Google cardboard VR has been tested in several schools. My local school district tested it last year. My son was not old enough unfortunately to be part of that. I heard that it went very well and the kids like it. The teachers were able to take classes on tours of the Great Wall of China or New York City. It is the perfect tool for experimenting with VR. We are getting closer and closer to ready player one. If you have not read ready player one that is your homework. The audiobook is better. It is awesome. Another headset making the rounds is Muse. This encrypts me out. Maybe feel the same way. It is a brain sensing had been that shows the teacher how the class is reacting to a lesson. That information could give teachers better understanding about what is working and what is not. I'm cooked up by the idea but that is cool for teachers. I like things digging in my brain. But for like my son who is not

good in math something that can be better for him and making more interested that is the way to go. That is coming your way. It is out there. We talked about the tattoos. Those were interesting. What about implants? Remember I talked about wearables are things on your body? What about things in your body? That comes under the header of wearables. It is interesting how many people get free out at the whole idea of implanted wearables. We have had more than a couple of these for a while. Cochlear implants have been around since the 1980s. Contraceptive implants have been around for a while. Then you think about all the other devices hip replacement pacemaker and all the things we stick in our bodies for medical reasons. The main difference is those devices typically do not have communication capabilities. That is the piece that is new. One was about putting things in your body that can communicate with the outside much more than any previous device has done. Here is an x-ray. -- of someone with a couple of different microchips embedded in their hands. These were implanted GPS -- let me back up. These chips are the size of a small grain of rice. These are real microchips. It is not a new idea. How many people have microchip your pet? I know my cats have GPS chips in them. Lots of yeses. We have been sticking microchips and dogs and cats for a while. This is going a step further. Not just because they are in humans. These are NFC chip's. It is similar to what phones have in them. What you're looking at is hands from a Minnesota software engineer. He had a small incision made to put these tiny chips and to admit low frequencies. Then he programmed the chips to open a smart lock at home and control his smartphone. Another example is a woman who had one embedded to use her chip instead of a key card at work. Imagine you cannot lose your keys because they are literally in your hands. There are some downsides. The one company doing these their name is freaky called dangerous things. It is a online company. They sell the device and injection kit for \$57. These implants are not being done in a doctor's office. Typically they are done in tattoo and piercing shops. You run the risk of infection if the procedure is not done properly just like any other piercing you might do. Dangerous things once customers quote, this device has not been tested or certified by any regulatory agency for implementation or use inside the human body. Use of this device is strictly at your own risk. I like the idea of not losing my keys but I'm not ready for this. It is here and happening and available to consumers. If [ Indiscernible ] expect -->> I'm not sure why they chose the name. Maybe they wanted to make it clear it was not regulated. Angela brings up a good point that I'm not covering today. Also something we think

does need to think about is that it is double without warning. That is another thing that will keep this from moving quickly. Good point, Sarah. It would get obsolete and have to be replaced or removed periodically. What happens if you have to update more than the software? There are lots of issues and I'm not sure I would want to keep opening my hand to live in a new device. In Virginia these could be useful for the basic and medical information for EMTs to get quickly. How common is this? I do not have numbers. I think it is very new. We're talking about emerging technology. I think it is going to have to undergo some evolution before it becomes in place.

>> What does all of this mean for the library? If we see the potential uses and various fields continue to grow we're going to see a lot of social logical and cultural impacts. Go back 20 years and if you saw someone staring at someone in their hand walking down the street would've

thought they were a nutcase. Now we have places around the world where they have walking lanes for people looking at their phone. We have seen big changes. Not sure you have to answer questions those questions you may have to go to the dangerous mines website. We have seen a big impact from the cell phone revolution. Analysts are predicting that wearable technology will change the links got -- landscape and the nature of mobile phones and handheld devices. Do we have to think about these now? Probably not but there are interesting things on the horizon. I'm fascinated by the wearables spring so about interactive content. We are talking about web content. This is a little scary.

>> Video has conquered the Internet. You do not need me to tell you that. Mark September came out publicly and said that by this year Facebook would be 75% or more video. They are pushing that. What Facebook wants they get because they role social media. They are both getting 10 million video views a gay -- day -- billion video views a day. It is eating the world. There is a reason you are seeing so much video. That is because video engagement is much higher. Your chances of getting someone to comment like or share take a specific action they are much higher than for just a photo. Here are more statistics. 1200% more sharing than text and links combined. 60% will watch a video before reading any text. I think that surprises no one. Frankly most of us presented with the choice between reading the while watching a video are going to choose a video. It is much easier to learn for many people. Member, one thing I talked about the social media in previous webinars in the series is how much social media is mobile. It is 80%. This last that should not surprise anyone. 92% mobile viewers share video. Considering most people using social media are on mobile they are much more likely to share that social media if it is a video format. How many are familiar with spectacles? Anyone? It is okay to say no. There has not been as much hype around these. This is a fairly new thing. I cannot tell you exactly when they premiered. Late last year or early this. This is from Snapchat. Snapchat rebranded itself. Not the app but company. They are moving towards becoming a camera company. Selling hardware. What they are doing is unifying software with the hardware. This is their first hardware release called spectacles. It is a \$130 pair of video capturing's glasses that record short videos. I think it is interesting considering vine just went under and was doing much the same thing. You can send the video to your phone. Here is an example. It takes circular video. When you see the final product is not circular. >> The glasses have the built-in cameras. It takes a high-level view. Think about go pro who built an idea but making video and small segment in a. Glasses. It is a perfect set up for a new live video. I can talk about video a lot but we have seen a shift from video to live video. We will talk a little more about that. Pretty soon you'll be seeing Snapchat live. Just like using Facebook live. A key part is providing spectacles. Think about performers on Snapchat who will be able to take their audience onto the stage with them. If you go to a concert you will be able to bring your friends. Take about wedding guests who could watch the wedding will from the top of the priests knows. I think it is going to be making shooting points of view videos easier for some folks. Unfortunately this did not translate into Adobe connect. I encourage you to look at the spectacles website to get an idea of how it works. This demo is not going to work inside of the webinar. Really one Snapchat has done is going to change things a lot. What you cannot see is if you change the orientation of this phone the video will adjust accordingly and a interesting

way. They have created the first response of video. If you know what a responsive website is which is a site that the dish fills the screen the video is doing the same thing. It is a interesting new feature you will see incorporated into further devices. With pricing out spectacles versus go purrs very interesting. I mentioned Facebook live a minute ago. Just to give you fun stats between Midshipman-May and Midshipman-June media firm streamed more than 5000 live videos. By the end of last June half of the biggest media pages had used Facebook live and many pages were streaming six times more live videos than they were publishing. Brands are getting adaptable and using live video in creative ways. Here is one I would've never expected. Live video is being used by Experian. They use live video for chatting about yours credit score debt student loans and ways to improve your credit. These guys learn from the privacies of Google glass. Spectacles light up when recording.

>> Yes they do. That is one way they jumped over the particular obstacle. Experian is using live video to work with customers directly. We are also seeing it take off in other ways. General Motors became the first brand to live stream -- on Facebook. We are also seeing live video used by other large brands. The Tonight Show uses Facebook live to show behind-the-scenes footages. This is becoming the mainstream. There are all kinds of live events you can look at doing live video with. Now everyone can essentially be their own TV station.

>> For example, Taco Bell used it to hold a mock press conference last year. GE used drones equipped with peers go. I believe that is now rebranded as twitter live. They used their drones equipped to give guided tour's car facilities. It is being used in all kinds of creative ways. This next light is where we need to sit up and pay attention. Social video will be reviewed as a required gateway drug for all brands that want to move into augmented reality or virtual reality within the next three years. Why is that? Because of the interactivity. Which is ironic considering one of my past webinars in the series I talked about how VR was not very interactive. It is becoming interacted very quickly. When you do live videos on Facebook and other platforms it is interactive because people can comment and put their reactions in real time. If you have a Samsung gear VR you will be able to connect your Facebook account like and share 360 videos. There are the 360 clips in the video app and argue the script will be on board. They will let users sign into Facebook to get a personalized feed. They are late to the game considering Facebook want them in 2014 but they are finally getting into gear. All this interactivity is coming to VR and coming to live video. Angela says does anyone know what kind of language is used for augmented and or virtual reality? That is an interesting question. >> Here is an example of some of the content that is not live video. This is a particular kind of content. It is a hybrid. They are called teleports. You will need to go to this URL. They are Democrat -- difficult to demonstrate outside Adobe connect. The idea being you can take a video input all types of components on interactive components in it or on top. So when you see certain things in the video it will pop up and you can click on the icon to get more information. Teleport ninja is what is doing that. Ruth says how our privacy issues addressed live video? Do you have to get permission for shooting? I am not a lawyer but I would assume whatever you have to do for photographs will probably apply to any video life. Maybe someone with more experience can speak to that but I would assume they are pretty much the same process.

>> This when you have to go look at. We lost the URL I will have to add it. This is New York Times these are very hard to explain. Even if everything transferred over this would not have. The New York Times is doing fabulous things with interactive content and hybrids. This is a combination of photos and interactive components and videos. They are telling a story. It is a fabulous thing and does not really have a name. Maybe they call them interactive stories. If you have a chance look at these. They are nifty. The New York Times is also doing something else. They are army reporters with the ability to take 360 degree cameras. If you measure Matthew can take in -- mouse you can take in the entire scene wherever the news is happening. Whether it is in the middle of a disaster or any place the news is breaking. They are integrating it into their storytelling. It is imaginative and they do it today every day with one story. Infographics. How many are doing infographics at your libraries? Anyone?

#### >> [ Silence ]

>> Angela's ashes wants to. Someone just started. Good infographics are hard to do but they get shared a lot. If you can do them they are good engaging content. Yes easily is another one. I have done a lot of infographics without one.

>> Infographics are one of the measurable types of content. This new generation is not just visually stunning but is actually engaging and interacting. It includes animation. Sorry to give you so many things you have to go look at after but there is no other way to show these things. A infographics is quite large. Users can click to find out more information about specific things. Users can highlight certain areas. There are scrolling effects in social sharing right from the graphic. That all sounds cool, right? If you look at this the first thing you'll probably think is it is cool and I want to do it. I am right there with you but unfortunately I have not won the lottery. There is one company mostly providing this functionality it is called Saros. Saros starts at at \$3000 a month. This is something you will see big companies get into. Unfortunately it is not in our budget. Of already checked the competitors and they are just as pricey. Do not get big Google lies unless you have a heck of a budget. They are fantastic but unfortunately I do not know any library that can afford to do this. What does interactive content mean to me? If your library has not moved on to doing video of any kind you are beyond the curb. I do not often say that but in this case your library is behind and you may want to jump right into Liberia. It is not the only way but that is where things are going. Remember, I'm not going to tell you to do too many of these things but video is one of them. There are a lot of guides online. How to do live video. Or regular video. Regardless of whatever platform you are on. Also, starting to experiment with other forms of interactive content like teleports is not a bad idea. You want to attract more attention because they are newer. Last bit we are going to talk about everyday artificial intelligence. For decades we have seen that people talk to computers. Dave spoke to how and Mike had kit in the Star Trek franchises you talk to computers or the computer. So we are used to the idea of talking to computers but only recently has it come to pass. Amazons Eco hick the the market two years ago and people said dreams come true we can talk to the computer. It did sort of. The echo is affordable response to voice command. You can talk directly to Alexa who lives inside the echo. You can ask your questions and get responses. It is clearly not full on artificial intelligence. But it has well people. You also have Google home which is a similar device and rivals the echo. Neither system is going to turn into your virtual

best friend. The Amazon echo answers who when and what questions. You can ask you for a weather forecast or sports update or convert cups 2 ounces. A lot of times the echo will admit to being confused. Gogol -- google has the same features but tends to be a bit smarter. It has the Google empire in its best knowledge of infrastructure behind it. Know I had not about the hurt doors -- court case involving the echo unless it is about kids buying things. Was it that one? >> When you look at the picture it begs the question where is Apple? Apple is a wall. Why? Apple's interiors for keeping secrets. So we do not know what form of Siri power devices going to take but it will probably be coming soon. Siri works with apples protocol called home kit. You can make applications that work home automation products. You combat especially because Apple does not get left out that something is coming. We do not know what it will be. A few of the things AI related. This one is on my radar to purchase. This is despot.

>> This connection smartphone by Bluetooth to your car. If you do not have a smart car you can get one for 50 bucks. It is scheduled to release in July. It is 100% voice control. You can get turn by turn directions region text aloud to you who is calling and say despot navigate home. Despot played nickel back. It will play all of it through your car stereo. Says I so need this. >> I know I have been eyeing it to. I can do some of this with my phone but a lot has to be

initiated with me picking up the phone which is never safe when I drive.

>> Here is another thing. I could have put this under wearables but I put in the AI category because I thought it was a better fit. This is another thing that is almost a hybrid. This is the first virtual trainer. It is \$279. It is the first true AI in a wearable and uses bio sensing headphones to coach you while you're running. It gives you real-time insights in a chapter training. This is the first of its kind. Is started as a kick starter project. This is funny when I sent it to info people is says it looks like an annoying alarm clock. This is Bongiorno. This is a voice controlled AI enhanced alarm clock. It is like a personal assistant who knows a awful lot about you. Bonjour can make recommendations. It also knows who is talking. It can biologically identify one person from another. Yes and -- yes Mary it is nagging. You can adjust your wake-up time if certain positions are filled. Let's say you have a meeting and cannot be late Bonjour will check the traffic report and wake you up earlier if there is a traffic jam. If you want to start your run at 6 AM Bongiorno checked the weather and let you sleep and if there is any rain. It also connects with iCal Google calendar were in a bunch of other things. It is also compatible with Amazon Celexa. Lots of things are connecting with or using the Alexa technology. If I have a good jet enough the last thing I want to show you is this.

>> I does not a consumer thing but I thought it would be nice to be aware of AI behavioral in looked at. You may be familiar or heard of Google's deep mind which is there big AI project for serious AI applications. What the Google team did was ran 40 million terms of a simple fruit gathering computer game. They asked to agents to compete against each other to gather as many virtual app is as they could. They found that things went well. As long as there were enough apples to go around. As soon as the apple started to dwindle the to a got aggressive and started using laser beams to notch each other out of the game -- knock each other out of the game to still the apples. That is a little frightening. The researchers suggested that the more intelligent the agent the more they were able to learn from their environment and use highly aggressive tactic. Who does that remind you of? We are looking at these very sophisticated AI

agent. The more sophisticated they are getting. Stephen Hawking's and Bill Gates at one of their biggest concerns for the feature is AI. What is everyday AI? This does not mean anything to us yet as librarians or library staff. Unless one of these gadgets appeals to you individually. Perhaps in the not too far future we will be asking a AI agent to print out the list for the day. That may not be a bad thing. I could deal with that. So these things are coming. They are coming but is nothing we have to worry about yet. What are today's realistic takeaways? >> Wearables are evolving fast. So fast that in a six part series I've talked about them twice. Eventually they may run on your library Wi-Fi and bring up security safety issues. Some things you may control some you may not. Know that these things are moving fast and keep an eye on the prize. The one to do item live video and interactive content. It is time to start moving on from whatever it is you're doing which is probably much more static. As far as AI -- that may be why Google car bird -- cardboard is going to take off because they do not cause a lot. If they can do that with other wearables that will capture more of the market. It is in their interest to get it to a level where more consumers can afford these things. Virginia said to you consider chat box AI?

>> That is pushing it. In my personal opinion. They are limited right now. I think the goal is to make them less limited. I do not see that. As far as AI goes I do not think we have to do anything with them yet. If I have not freaked you out enough today, or if I have, I am happy to take any questions or comments you may have. I do see some folks typing.

>> Yes called the matrix. We do not live in the matrix yet.

>> Who knows. We could have lived in all along. It is funny to talk about these things.

>> Phrase of the language tab box I have been using are definitely not AI.

>> Things like Facebook which is the home of many checkmarks all the ones I have interjected with have been limited. Some more limited than others. There are some nifty ones but in my mind they are advanced version of Eliza. The most annoying original Chabad around since the 70s. If you have other questions is fine do not get the big googly eyes over too many things. Thank you for coming today. And thank you to info people for having me.

>> Thank you Laura. Do you want to wrap up?

>> I was looking at the comment I forgot we have posted time let videos on Instagram. Thank you again, Laura. To our audience this presentation will be archived along with the chat. It will be available shortly. We are now going to post a link to a survey and certificate of attendance. Please take a few minutes to fill out the survey. Thank you and we will see you at our website -- next webinar.

>> [ Event Concluded ]