Visual Communication Design for Digital Media

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Lecture - 16
Visual Design Methodology Part-II

Welcome students to the online NPTEL course on of Visual Communication Design for Digital Media. In the previous module, we started discussing about our design; generic design methodology. We will continue that and we will discuss what are the generic design methodologies; broad design methodology is in that we are mainly focusing on the graphics and application design because animation is a little; the methodology for the animation and game design is a little different.

So, later also is later we will discuss each and every paradigms of digital media design in detailed fashion. So, there we will discuss about animation and animation and web design and graphics design separately with their detailed methodologies. So, in visual design process of generic visual design process first here in the diagram you can see. So, we generally follow four steps first is orientation.

So, aligning or understanding the user and orientation also is like understanding, what kind of design brief that is what is the needs of the design; what purpose it should fall fulfil, then collecting and also it is talking about collecting all the data about the user all the data about the what kind of style what kind of colour we are following and creating an idea about what the design will be and then next phase is analysis.

Analysis is can be in terms of user analysis analyzing; what kind what is the user's need, what they expect in terms of visual communication and it can also be a visual analysis. For example, if we have a predefined set of what we want to achieve or look board or the mood board and from that we had to analyze what kind of salient features it have; what kind of visual we can derive and what kind of line qualities what kind of colour we have to extract from that. So, we can create an colour palette and all these elements.

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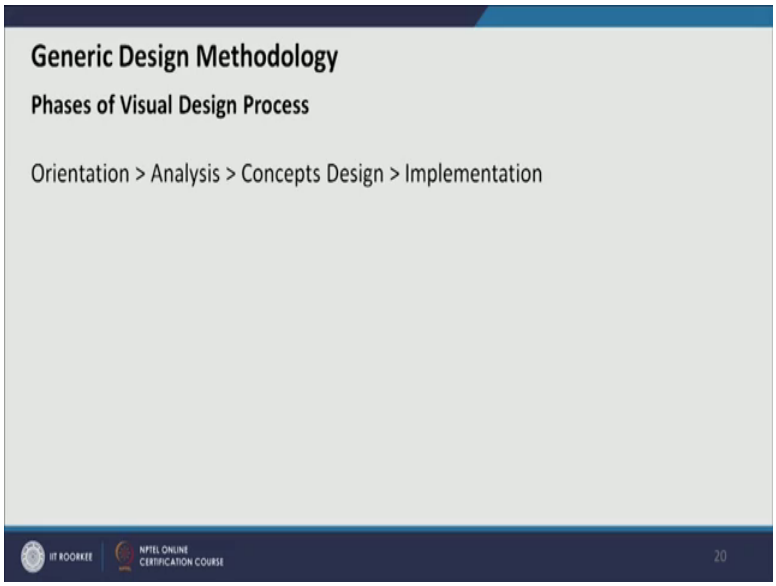

And we can specify these things in during the analysis part and then we start proceeding to our concept design; that is the first stage of design where the design will be in very conceptual level. It will be low fidelity or the initial designs and we can also have 2-3 different concepts which is like multivariate concepts.

So, we can also test, we can call this alpha beta and gamma; these different low fertility design and we can taste to these designs with the user again and then identify whether the concepts were has needs some improvement or there we can go ahead with the concepts. And then we start moving towards finalizing the design or implementation with adding more detail into it and going away with deleting the problems and then iteration and to towards the more high fidelity design prototype.

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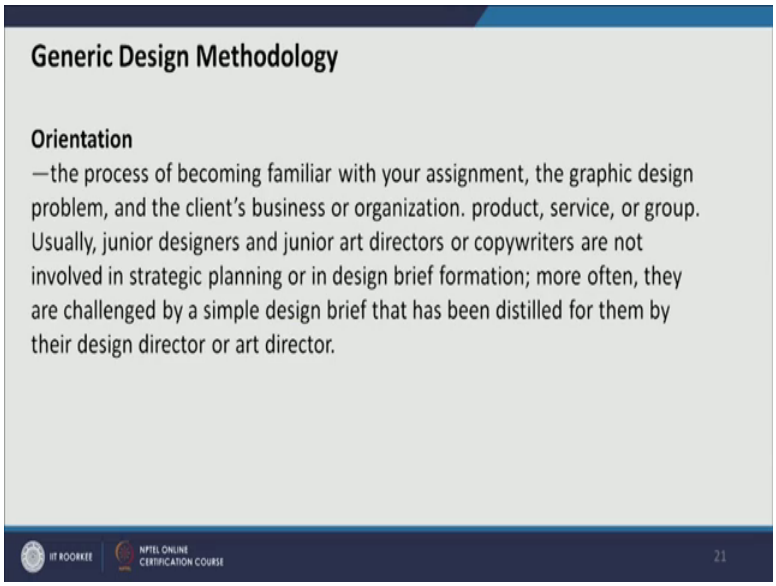

So, in orientation is the process of becoming familiar with the assignment in terms of graphic design, the problem understanding the problem what kind of for what kind of band we are working with what kind of users we are dealing with and gathering all the informations together is the orientation process.

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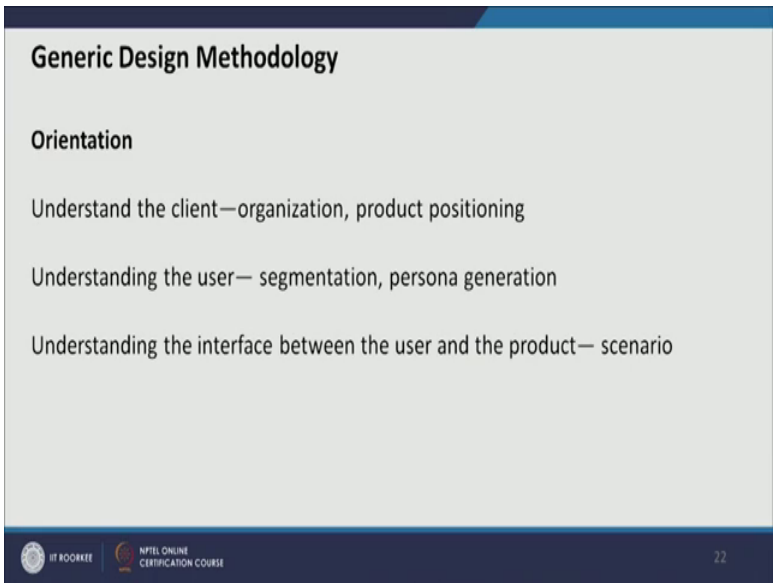

So, in orientation process it is here you can see there are three things one is the understanding the client or organization or product. So, if we are walking for our brand identity or creation; we need to understand what kind of brand is that and what is our

clients need and then also we have to understand the user what kind of set what user set we are working with. So, we will discuss about how to identify; the who is our real target audience or the user through different processes different tools and techniques like generating persona creating scenarios and doing a ethnographic survey and how to understand user in a better way.

So, segmentation persona generation scenario building and all these things are there. So, understanding also the scenario will come in the next phase which is understanding the interface between the user and products. So, first we have to understand the product or the client under that set and then we you have to understand the user and what is the interaction between them scenario is like that. So, scenario means how depicting a particular context where user is coming with the product.

So, how user are dealing with the product, it can be depicted in terms of a story boards each and every set each and every interaction with the product and user can be depicted with the storyline as a narrative or it can be depicted with the running paragraph. So, for example, of a scenario for a website will be for a particular user website of a flight booking site will be a particular user wants to book a flight through a particular website and it can be we can detail it farther like, but they can the user can use the book his flight in multi city mode or it can be in 2 way.

So, these are different kind of scenarios and another scenario of the same visual user with the same website can be they want to check their frequent flyer mileage or they through the same website they want to book a hotel. So, they are different scenario, but the user set are same here and the band or the product is also same that is a flight and hotel booking site.

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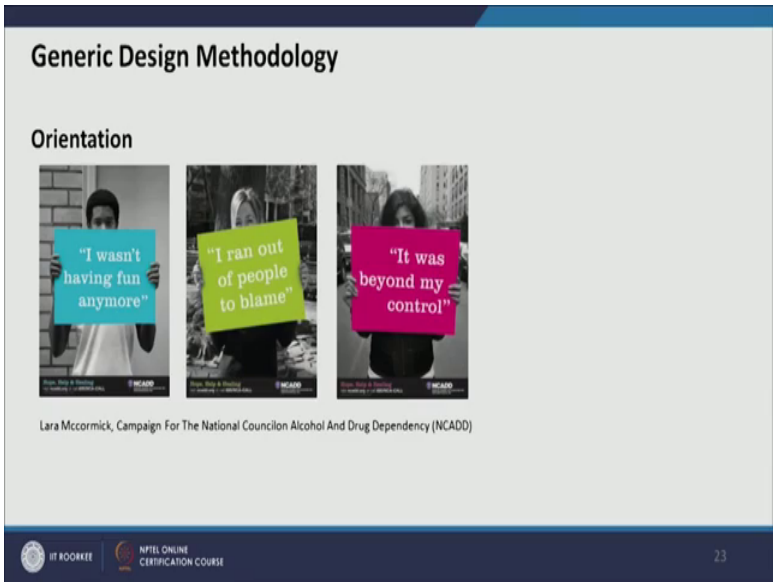

So, here we can see some examples like understanding the users. So, user it can be also depicted with some photographs. So, from that we can start editing for our design as well. So, users are saying something like.

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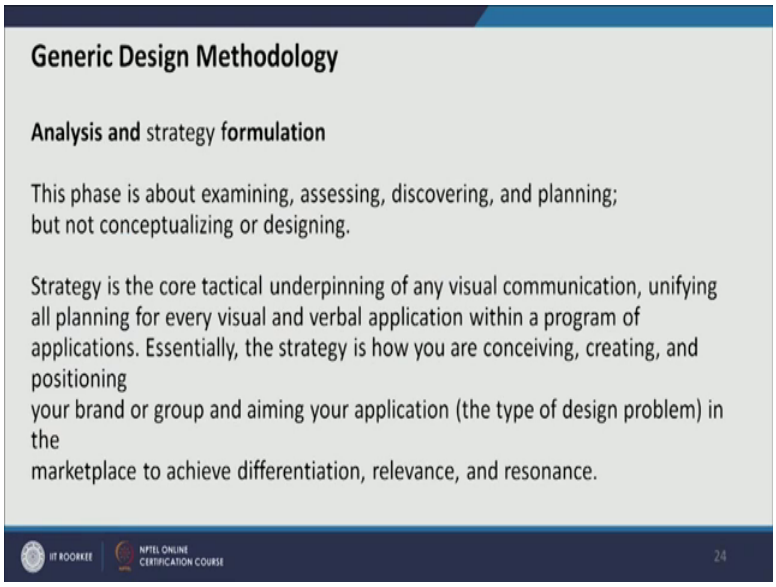

What they want to see and what for that we also understand the user in a bitter way. So, next is the analysis and also after analysis we also formulate the design strategy. So, the strategy is a core tactical thing based on that we will find out what is the conceptual design will be formulated based on the strategies and an analysis. So, that gives us a

complete understanding of design brief initially we were also discussing about the double diamond method of Donald Norman.

So, analysis is the end point of the first diamond way where we exactly pinpoint what is the need what is the problem. So, after analysis the first time on ends and we clearly define what we are going to what is the problem we need to solve after that again, we start diverging in the second diamond or the double diamond method which we have just discussed in the previous lecture. So, in that again we start diverging in the process. So, where we start identifying different model what will be the next strategy which is the concept design.

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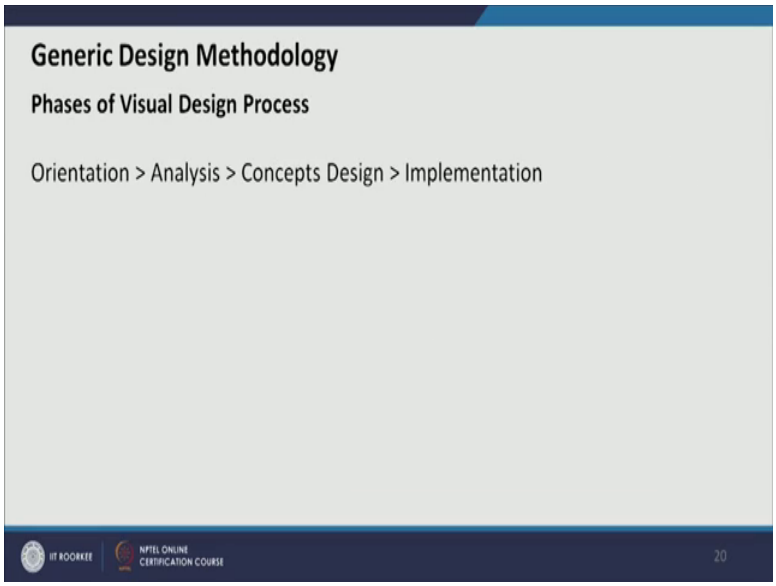

So, orientation is the first phase of the diamond where we are start understanding the users start understanding all these user's problem and the analysis is where we start thinking about what is exactly our user's need. So, here we are converging and pinpoint we do pinpoint a particular problem and console generation again we diverge and generate different concepts and test with that and during implementation stage we select a particular the optimum solution. So, the implementation is the diver converging a part of the last diamond.

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So, in analysis or strategy formulation here is the example we can see the example of analysis from a design product as well it can directly translate there. So, its talking about its in the little monster it is a brand which is talking which is targeted for the kids. So, here in the analysis they must have fixed some kind of particular users need for example, there the user is particularly; the kids they like vibrant colours and they are they have some affinity and they have some liking towards the different kind of monsters which they see in different animated movies and all these things which they like.

So, what do they like what they are like liking in terms of colour; what they are likings in terms of characters and all these things; they have designers have analyzed and that product is translated in the translating that analysis part of their colour palette and all these things into the final product.

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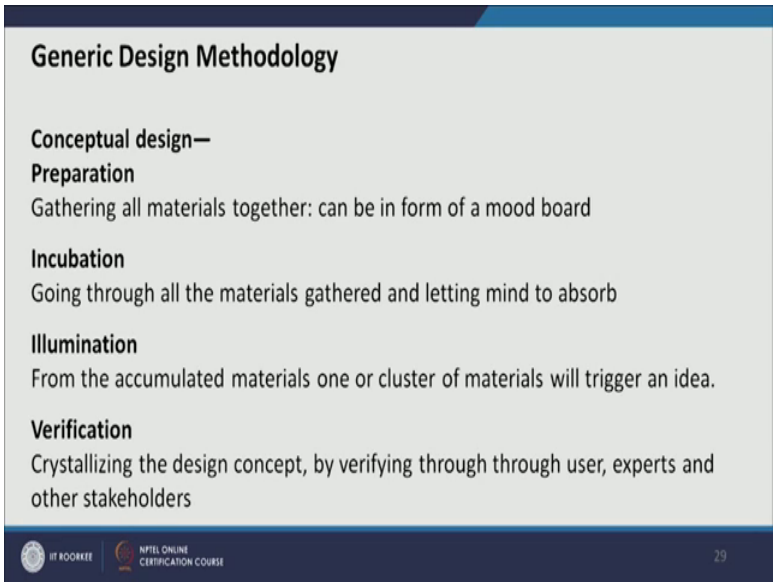

So, in conceptual design it has four steps one is the preparation. So, gathering all the materials together to design the concept to start with the conceptual design then we have to incubate and we have to sensitize ourselves through your different models like mind mapping and other similar models which has been discussed earlier and then we have to illuminate ourselves we have to enlighten ourselves about the material palates what kind of to trigger with the idea. So, for example, in the mind map also with all these words which is generated from the mind maps will trigger our ideas to go creative and start designing something new and then verification process also is the end in the final stage of the concept or actual design process.

So, after conceptual design we will have a lot of multiple options we should create a lot of different options and taste that with the user and we can also verify with some focus group discussion about the experts. So, experts can also verify in terms of animation and game design and we in terms of new design where the product does not exists, then the experts opinion and the people who are sound with the knowledge of the domain will verify that otherwise we can bring it to the user and user can test and user can we can go with the usability testing for the verification and just before the implementation of the final design.

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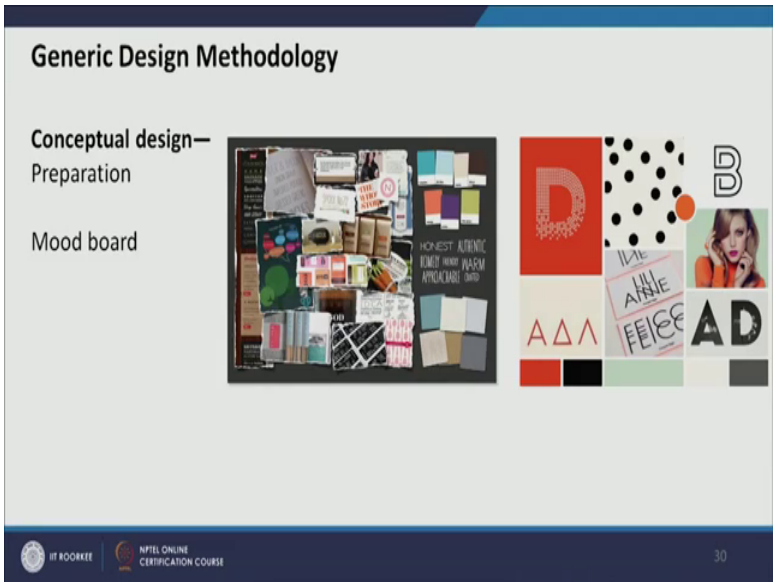

So, in the preparation stage we have to generate a mood board which I was just discussing. So, in mood board we have to jot down all these sets which all these colour palettes which we have de derived from the analysis. So, mood board can also be designed in the analysis part. So, while we are doing the analysis we start jotting down all these things and create a mood board and mood board is the starting phase of the conceptual design start.

So, it is not like mood board is whether it is there in the conceptual phase or in the analysis phase it evolves from the analysis phase and its and the concept generation starts from the mood board. So, mood board is where it is like a collage and where we put all the colour palettes which we developed from the analysis phase and what kind of colour we want to use in the design and what kind of type phases what kind of imageries we all create a col; we take everything together and create a collage. So, from that we start designing our first conceptual idea.

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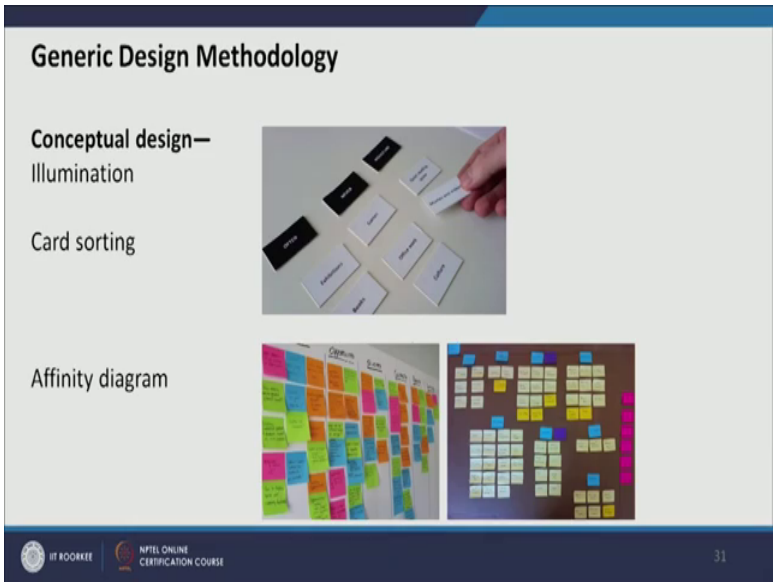

So, also there are other tools and techniques. For example, card sorting to understand the user better and to create after understanding the user and to create the information architecture.

Card sorting is more towards like translating the user need into the first concept generation stage. So, in bottom of approach or in participatory approach of design where designer's co create or co design with the user. So, here it is not understanding the user does not stop in the first phase. So, that also continues in the conceptual design phase because designers create the design with the help of the user. So, user understanding the user is continuous in the continuation or with the conceptual design process as well. So, in conceptual design process user sits with the designer and they create the fur first concept. So, in that user designers can give some kind some something written on the card and give the user to sort and arrange and create their find conceptual design. So, in card sorting it can be implemented in information architecture.

So, all these tabs of the button and all these websites different pop ups and buttons and what links can be written in a small card and the designer can ask the user to sort and arranged according to their mental model. So, their mental model will be directly translated into the conceptual design. So, the design will work better and has will have more usability and more you will be more user friendly. So, affinity diagram is also a similar process. So, in affinity diagram what designers ask you user to do is group the

similar thing together for example, if there are some if the website has different tabs. So, user can group the similar tabs which has similar functions in one group in card sorting it was like users will select and pick one card and which goes with their goes with the their mental model and card sorting is generally associated with some tasks.

So, user designer should tell them to do a task or pick something for example, this for example, it can be a for understanding the colour if designer can tell that ask the user that whether this website goes with this kind of colour or with this kind of typefaces when user can pick that particular colour which goes with that and which what typefaces goes with the website. So, in card sorting it is that and in affinity diagram they start grouping together grouping the similar things together and then they create some broader groups which helps user designers to initiate to start the conceptual design from that clusters and the users mental model is becomes more clear in front of a designers eye.

So, in the next design development phase it is generally a non-linear phase. So, it is again user testing and then conceptual design and then I creations and all these things goes hand in hand.

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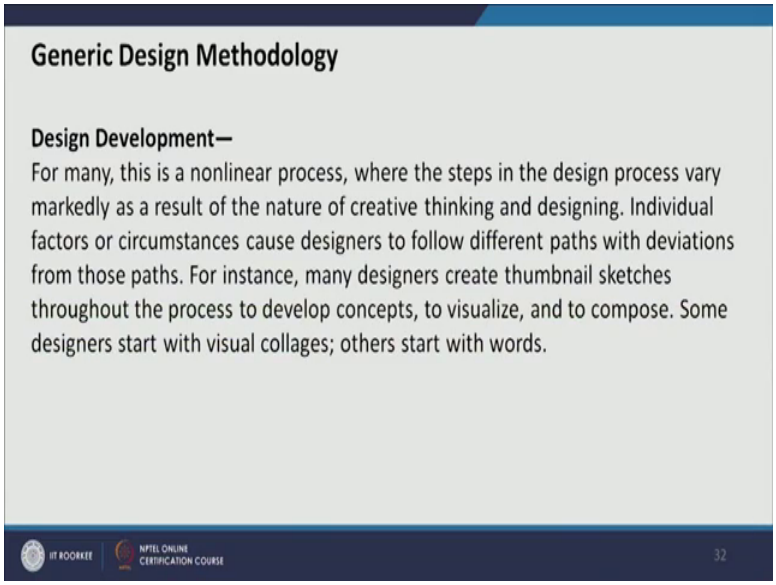

So, in that phase also we also follow that iterative method which we also design discussed earlier iterative rather than the waterfall model iterative model is on a more applicable. So, it is not a non-linear process. So, it is a loop. So, we have to follow the iterative model where we have to discuss with the user and then change our design and

redesign it.

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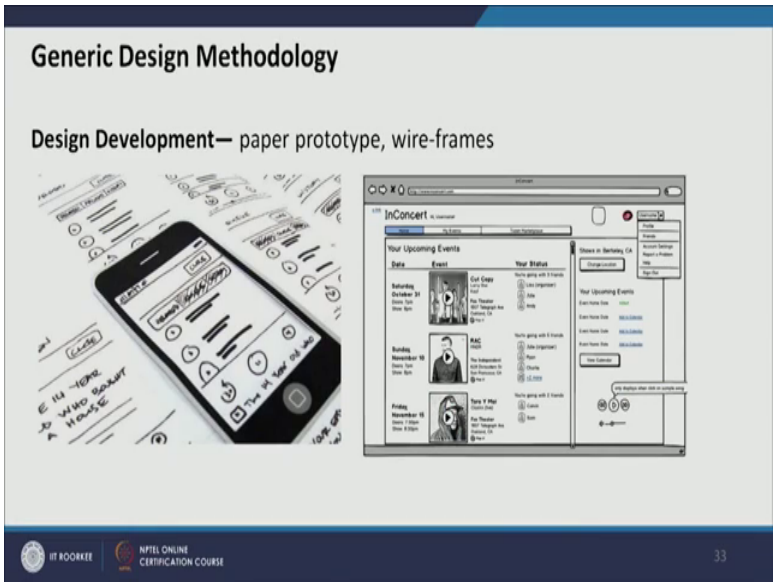

In that phase the first thing can be paper prototype of wire frame which is a low fidelity design. So, we quickly design something in this example we can see some wire framing examples of wireframes. So, these are not very clearly designed design concept. So, these are in a very conceptual level. So, we can just sketch or we can also use some wire framing webs wire framing to software for example, Balsemique.

So, there we can quickly design some sketchy informations and some tabs and so that we go with the testing very quickly and not devote much time into designing the detail thing and after testing the concept might be even scrapped. So, remembering that we have to design; it very quickly and very less time will be designers put very less time to design this just the thought process which we the designer accumulate from the analysis part is translated in a very quick sketches.

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Then the paper prototype can be tested for example, here you can see in the photograph it is for an iPhone. So, in a iPhone format it has been just a paper prototype has been given to the user and for user analysis. So, user can give feedback on this rather than designing a complete webs complete web application complete mobile application spending a lot of money and time on this only these wireframes can work and can give a direction to a to or what is the most usable more usable website and more usable final product. So, 2 hours after testing these things with the users we can we go towards the high fidelity design and towards the implementation part.

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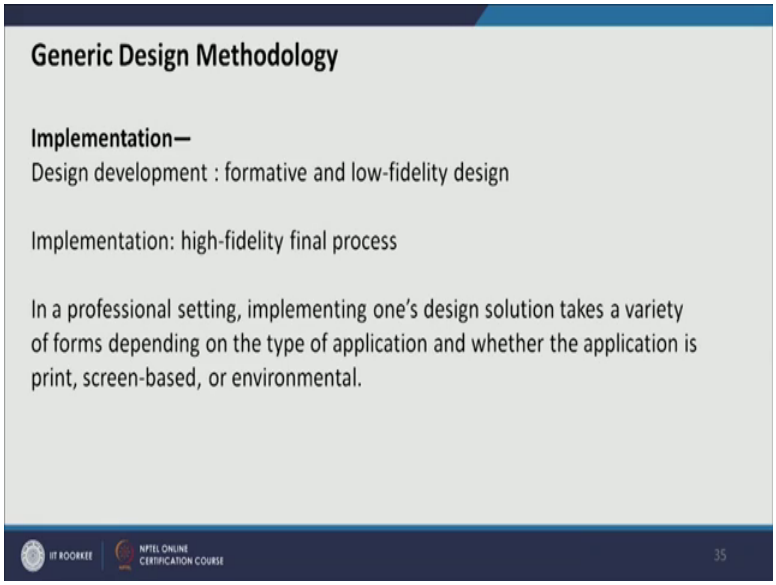

And implementation part is we start discussing we stop discussing with the user and it can users feedback can be taken, but the more the user feedback is taken in most of the user feed feedback and interviews has been taken in the previous stage. So, that we minimize our scrapping the design and redoing it. So, in this phase we finalize the design and start working with the only implementation part.

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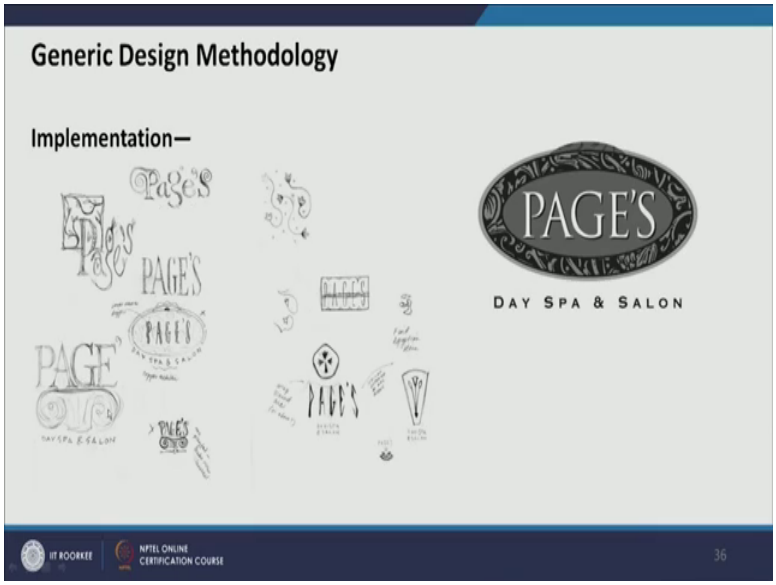

So, for example, these on the right hand side on the left hand side you can see a lot of conceptual designs and here only the final design which the based on the users voting and also it can be focused group discussion based on that a particular design has been selected and then that will be translated in the into the final detained high fidelity design.

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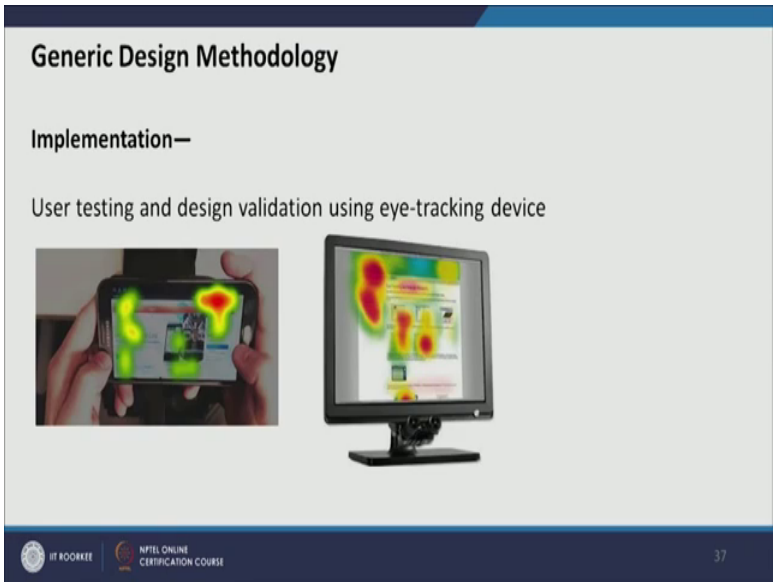

So, in this process also we do test with the design and validation happens. So, this testing should be initiate should be done from the initial stage stages and in the first conceptual stages the testing has to be done more. So, that we avoid the error, but in the final stage also we can do the final testing and the testing for testing as we have also we know that with eye tracker.

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We can do our testing in web design as well as in the graphic design that demonstration has been given this was the mobile eye tracker this is the recording device for the mobile

eye tracker battery can be attached with this and a s d card goes into this you can wear it this is the cable which connects the eye tracker and the recording device connect this and because this model is not based on Wi-Fi. So, we have a cable connection between the controller software which can be installed in our laptop or tab and the connect that which will connect the recording device.

So, this is the connection switch it on you need to switch on this and launch the software.

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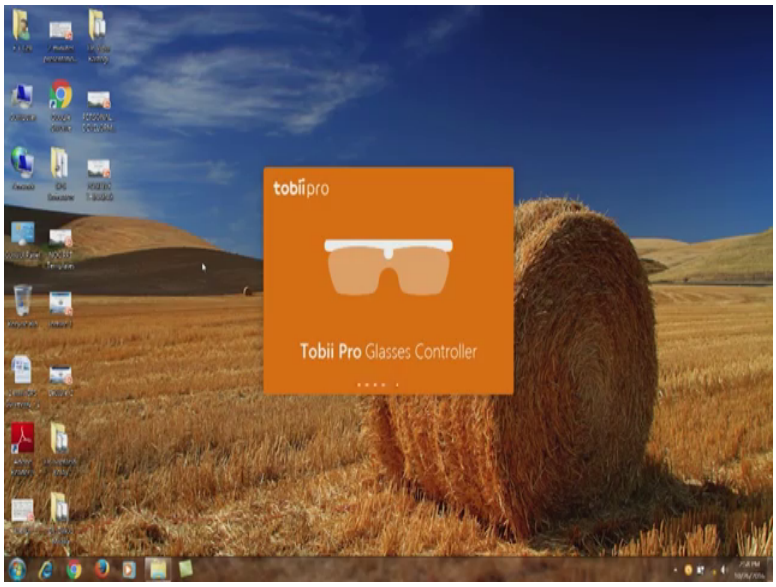

This is the glass controller software. So, the class controller software actually recalls what our user is looking at. So, the recording device is there here there is a camera over here and there are sensors which senses the eye and it signals the eye it senses the eyes position and based on that the eyes provision will be superimposed on the recording screen.

So, to calibrate the eyes provision we have to calibrate her eye movement the software is an eye tracking device controller software which shows what she is looking at and it is for the recording we also have a eye tracker analysis software which where the demonstration will be given later. So, this here we have launched the software and it says it is very funny recording.

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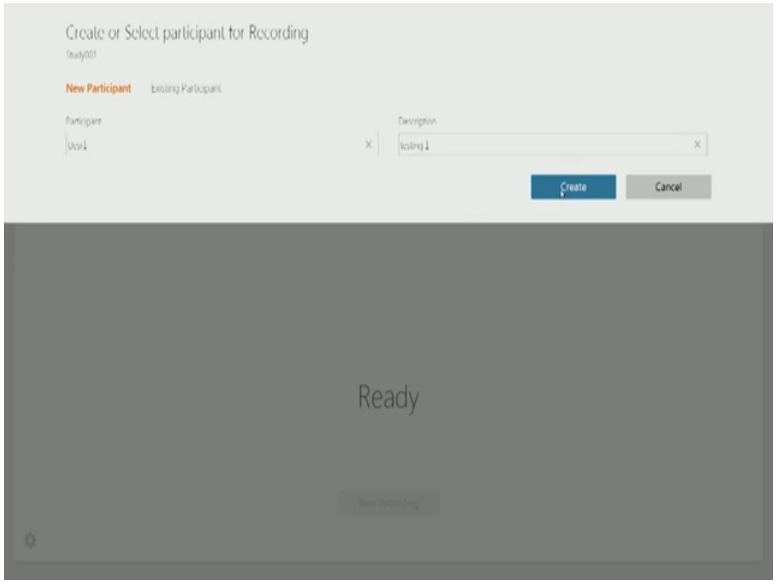

So, we click on this button we can write the users name and also could write a brief description about the testing and create.

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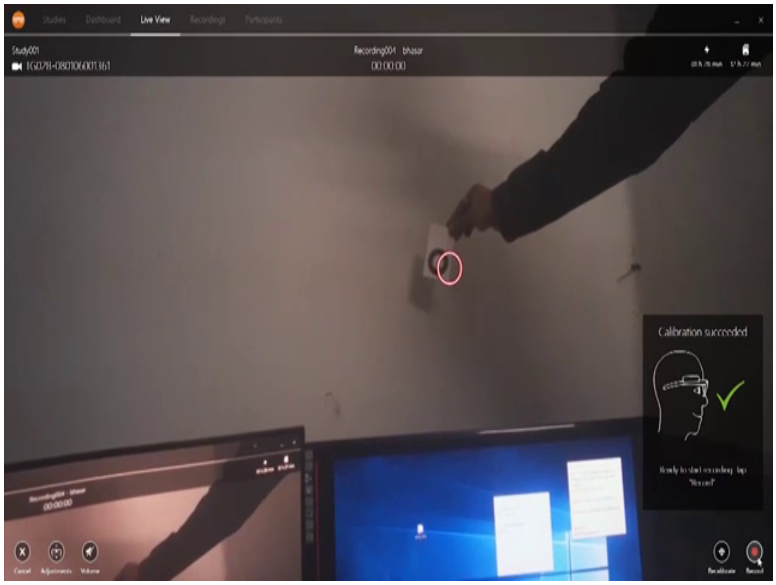

So, here we can see the video which is captured by eye tracker. So, it is the user's point of view. So, first we need to calibrate. So, that the eyes motion is matching where users are looking at. So, for calibrating we are using black circular dot. So, that the eye tracker recognizes this dot and if the user is looking at that the eyes position and the black dots position is matched. So, that we are calibrating the eyes position in terms of the three d

visual field.

So, right now, whatever after the calibration whatever we are seeing the eyes position is located and you can see there is a red circular dot appearing that you can see in the middle of the video. So, that is exactly where the user is looking at. So, after this, we can record a three a video. So, as we discussed that this eye tracker is the three d eye tracker.

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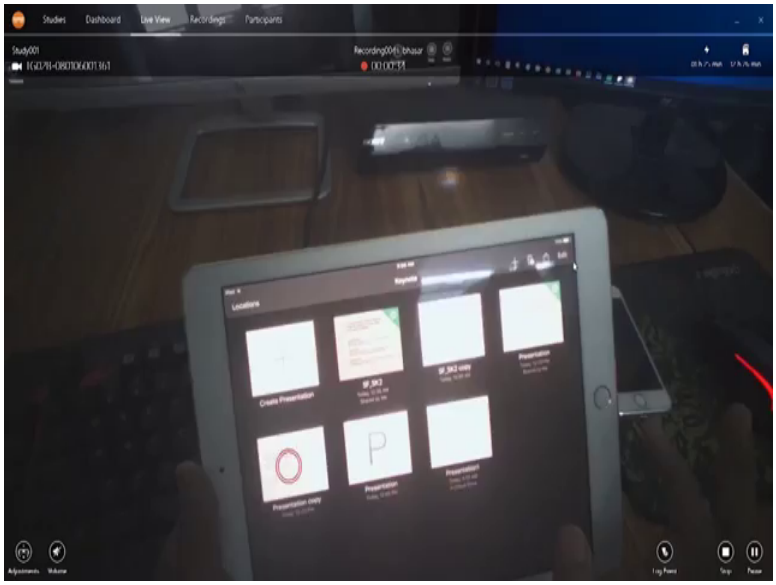

So, this is wearable. So, users wear it as a glass and there is another version of the eye tracker which can be fixed in the desktop. So, that is a desk desktop mounted eye tracker. So, in that eye tracker only that eye tracker captures the desktop screen and where on the screen with the where the user is looking at, but here you can see if the user is looking away from the device as well. So, that also can be captured. So, here the user is looking at the different functions different applications of an i-pad and the red button is um depicting where he is looking at in some points you can see that red button is disappears and again appears in some other point. So, that is actually where user is not concentrating. So, where the red button is appearing only that part user is concentrating. So, if there is a shift from red buttons position. So, those are the parts where users are not looking at and not concentrating on their visual, but just the eyes moves from one side to another side.

So, in the analysis part we will discuss how what is the different function of this? So, we can through the analysis software we can create heat map there we can understand where

are the fixation points. So, these are the fixation point where users are concentrating and some points will be just eye eyes are glancing through some points and this kind of eye tracker is very important for analyzing mobile devices and tabs for desktop specially we have to use desktop mounted eye trackers. So, here using this eye tracker we can see that all the function of our principles of design which we have learned earlier are possible and as well as we have discussed that Gutenberg's diagram and Jacob Nielsen's F shape diagram which we can be we can validate through using that.

So, here you can see the important notifications are coming on the bottom right corner and top right corner is also quite important. So, these are some examples through um where user is booking or going through a functional applications and after the recording is done, then user can book; you can stop click on the stop button and the recording can be stopped and you can this will be ready for the new recording.

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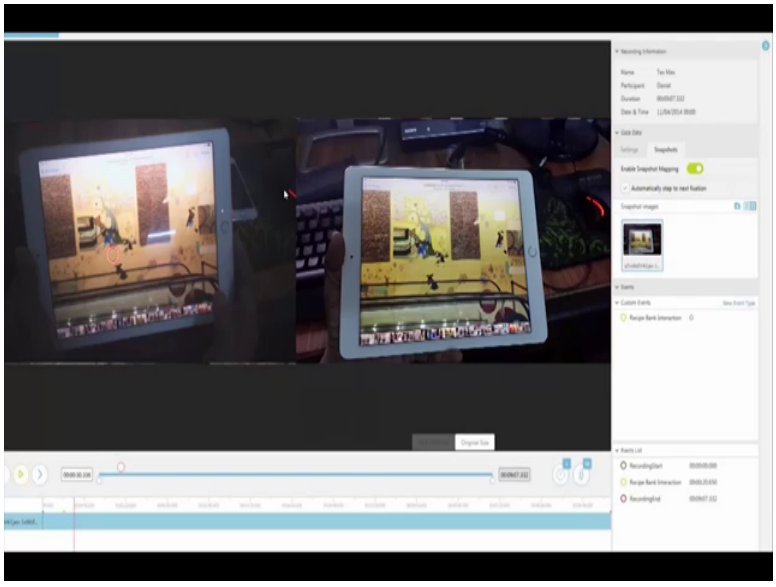

So, right now after the Toby controller software we can see some demonstration of the how the analysis software works. So, if you are install the analysis software and open it. So, here you can see the video of what has been recorded earlier you can see and the users eye location is also will be superimposed on the top of the video in the project dashboard it if you look at the top part. So, it gives you some options to analyze for example, it gives you the snapshot import if you import the snapshot and you it can and you if you do the visualization and it can generate a heat map based on the users where

in which visual area you users have looked for more more time and which areas eye have gone for lesser time.

So, here also you can see there are another op option on the left corner which is AOI which is area of interest you can create some area of interest base based on a snapshot and from the video it can track some of the it can recognize the similar area and it can generate it can generate the analysis and tell the designers how far how much time they have spent for a particular area of interest. So, we will check some demonstration

So, here it is a snapshot recorded from the; if you have seen the previous video from the similar angle, you have to click a snapshot of a particular image which you want to a on which you want to create a heat map for that on the right hand corner, if you can see the video will be played and you can pause on each and every time frame of the video and the location you can mark on the snapshot, if you have done the wall, all the after finishing all the marking on the from the video to the snapshot it will give you a heat map.

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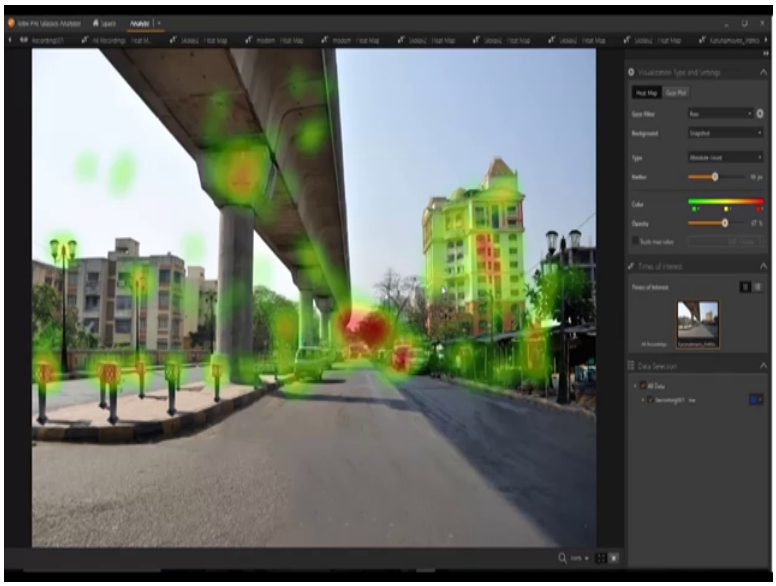

So, we are we have already done some heat map analysis on the previous some previous research, we have done it on the basis of our architectural space. So, it is a 3 dimensional space not unlike the wave application as it is a variable eye tracker. It can also map or 360 degree visual frame. So, for that we have taken visual we have clicked a real life photograph and on top of that we have done our heat map analysis. So, here you can see

the colour. So, the red colour depicts; the user's eye has spent more time on those areas and the green colour have depicts the user have spent some fewer time on this and where there is no colour from red to green. So, user have not looked at those areas for the given time frame.

So, this is actually depicting the a particular time frame has been taken under that time frame, user have not looked at this part of the sky, if you change the time frame, then there might be some points where they have looked at these areas of the photograph. So, for a better composition, as we have read earlier, the designer should try to utilize most of the field of their vision in a 2 d or 2 dimensional design. So, that you all the areas have some information about it, but also we have discussed some of the negative spaces where blank spaces also enfo; adds emphasis towards a particular subject; so, where there where you want to create a focal point you can add some blank spaces around that; so, that the focal point gets higher emphasis. So, finally, you can get export this kind of image as of visualization through eye track; eye tracker analysis software, there is another part. So, there is another recording which we have done earlier and similar points are located if from the video to the image.

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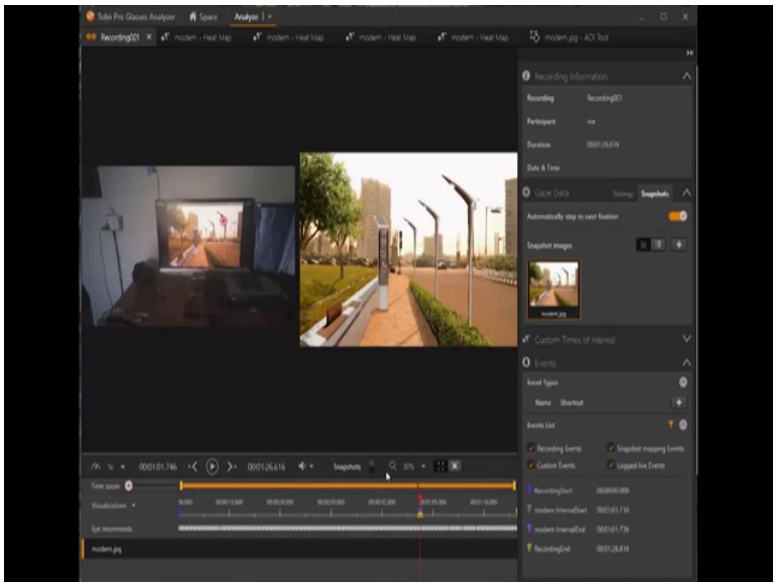

So, another one is the area of interest in the particular image we can create some area of interest area of interest can be created in terms of polygon.

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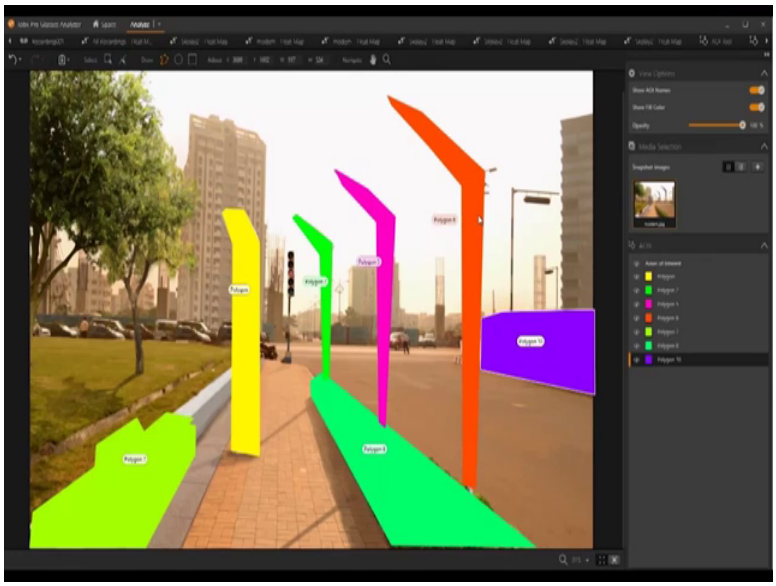

So, in a visual frame, if you want to mark some of the particular areas where user; you want to determine where the users attention has been drawn in a particular area. So, you can create on this button. So, draw button you can create some polygons and you can name these polygons polygon 1 2 3 to as much as many as you want and then on these areas, if you superimpose this with a heaped heat map you can generate you can understand that of these areas how much visual emphasis since they have on a particular image.

So, after that you can export this file and also you can get this file superimposed with the heat map, if you have done the heat map analysis of the same photograph through the analysis software with eye tracker, we can understand whether the visual communication is happening properly and the way designers want or not. So, through the testing after everything all the process is done the validation testing is done. So, before launching the website or before publishing the visual or visual graphics or the band branding or any kind of visual design; so, before launching or before the final implementations, this testing can be done with the eye tracker.

So, thank you. And in the next module onwards, we will start discussing the detailed design methodology in different paradigms like animation web design and graphic design.