

## **Case B**

**Participant: Designer 4 (P)**

**Facilitator: Xiao Zhang (R)**

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**R: #00:00:56-5#** So Can we start?

**P: #00:00:59-0#** Yeah, let's start. So where do you want to? I looked at the interview questions and just let me know where do you want to start from?

**R: #00:01:10-5#** Ok, from the first question in the list. So what's your role or responsibility in the health Radar project?

**P: #00:01:21-4#** Ok, well let's say, at the time of the project, so, I was heading the team, and so I have kind of the overall managing responsibility for the project which means that I had to..I was basically responsible person by creating the contact with the university. And I was sort of like overall responsible as suppose for the project and then I was also sort of like together with [the name of Designer 3] participating into design of the actual sort of concept, [the name of the product] Concept, and then I would say that [the name of Designer 3] was then kind of like the lead, leading the project to sale. So he was kind of like the mostly involved with only...he was very much involved for the design executive, and then naturally spend lots of amount of time on the field. But I was probably spending less time on the field then more time in the office unfortunately, even though this would been the interesting and it would been an interesting trip to be there with [the name of Designer 3] and the rest of the team. But typically, I was yeah, I think this kinda gives an overall summary of my responsibility.

**R: #00:02:45-7#** ok, yeah, so what are the design principles and design approach that guided this project?

**P: #00:02:54-8#** Well I would say that the design approach that we used was very much user-centric in the sense that we did not develop the system, give kind of the...well, let's say independently of the process that we wanted to facilitate with this design. So this basically means that we took into account kinda like the nature of Disease Surveillance gene when we were designing the system, and then also we were on the field try to get some feedback of the user, the actual prototype when the prototype had been implemented. So I would say that we...via a lot, we followed the sort of like principles of user-centric design methodology in the sense that we did some empirical research. Already at the stage of conceptualization, and then we also followed to the sort of prototype. We tell this field trailed. And then I would say that the sort of principle that we used when we were designing the actual system was that.. I think we have kind of a very high level design goal, was that we..we wanted to..we didn't want the system to force changes in the actual social practice or let's say in this case, the social practice was this let's say, network of health experts, Disease Surveillance experts in the discreet level and we would design tools that fit the existing practices and not messes that people who were involved in the change of practices, which changes their practices. So I would say that this is the primary goal for the design actually.

**R: #00:04:49-9#** ok, so the design approach is user-centered design, and the design principle that is fit in the existing practice.

**P:** #00:05:00-8# Yeah, I would say that that was very...at least for me, I mean I consider that as the very important factor actually.

**R:** #00:05:07-0# ok, yeah, so what's the design process of this project? so how did your design team follow the user centered design approach, what's the design process? yeah

**P:** #00:05:24-5# yeah, yeah, well I would say that we in the conceptualization phase, we were a little bit interactive, so we basically talk to experts in this field. So let's say this is Surveillance experts, **epiteam real logists?** People who are working in the hospital send **a lipia malaria?** In order to get an understanding of how the Disease Surveillance practices actually all across in India. At the same time, we responded to develop this [the name of the product] Concept. And then we also make some physics to the field to observe how the Disease Surveillance practices actually setup. And then so, this was really like....so. so both experts interview as well as let's say contextual observation, I think that is worked out. And at the same time, we were sort of designing the system itself.

**R:** #00:06:23-7# ok, yeah, so what are the major issues that your design team would like to address when designing [the name of the product]?

**P:** #00:06:35-2# I suppose what we want to address is that, we are interested in making....let's say making this Disease Surveillance whole system more effective. So that in theoretical stage, let's say that the stage when we try to understand the problem and question, so this stage reveal that at the moment, what's happening is that the information is flowing from the primary level to the...let's say the most central level...let's say the **district** level for instance, quite slowly, which means that this paramedics or the daily basis they would basically write some reports about how many incidents...let's say Malaria were discovered in one particular health centre. And then on the weekly basis, sometimes, even less frequently, paper based reports are sent to the district hospital or let's say that hospital are the district Disease Surveillance centre or the officer. And then from this district level, the data gets finally uploaded to the centric databases, and then of course after that, it's of course more effective and becomes **entrydized?** and actually support to many parties also in the higher level of the Disease Surveillance chain, let's say the officers in the daily or somewhere in the central places of the system. But, because of this fact that there is no enthronization happening at the entry level, at the ground level, this process is a little bit slow. So let's say if an outbreak happens in any given area of the...in any given district in India, There is at least one is not even 2 weeks delay until some central authority send notification of this outbreak, and that so what we want to address with the design was this...making this whole surveillance route or trail a little bit more fast and effective in the system. Information is uploaded into the system on a daily basis, but is paramedics. And that shortance significantly the sort of like a...time intakes for the data to be centralized in kind of computer system. And this was...when we talk with the **epiding dialogists?**, they were exactly on the **lining disfact?** that it is really important to kinda like a...make this kind of like a centralization of the data as fast as possible. So we were trying to operate in kind of...within one day cycle...and they were even...let's say if you hadn't reported within one day, so you would even get a notification that please report the data and so this seem to be...system seem to be sort of enforcing this kind of like more rapid **entryziation?** of the data which result...was actually quite interesting. And the other, the second issue that we wanted to address was that we felt that realization to the people who are involved in the disease surveillance chain or let's say disease report officers, or that data level officer and also national level sort of like the central, the core of that highest level of that disease surveillance chain. So these people have very good tools, so they may have computer system, someday they are doing office work, and they kind of like always, they always have a kind of long line access and computer based access to the internet.

And therefore, whatever they entrydized?, these people are always succeed, however, the people who are the experts who are working in the primary level, ie. the doctors, don't typically had a very good idea of what's happening, what is the disease, the data of like different kinds of diseases in their respective health care..let's say districts. And so, what we wanted to do was to also give mobile based tools for these practitioners so that would get a kind of up to date, real-time understanding of the disease to trace in the various areas. And we talk to the these practitioners in some..in a work that we organized, and it turned out that, the doctors had admitted that they take only access this kind of like...this type of like disease information maybe once a month when they meet other practitioners from the same district. And actually means that there is no efficient and fast way of sharing the disease trends, and this is kind of like the second aspect that we wanted to enable with the [the name of the product]. So we really wanted the information to flow back to the primary health care level as well.

**R:** #00:11:59-4# So how did your design team make such design decisions?

**P:** #00:12:04-5# how did we make such decisions you mean?

**R:** #00:12:09-1# yeah, how did you make such decisions and why did you think these issues are important?

**P:** #00:12:15-1# ok, I think, these decisions were made...I mean we were able to obtain this kind of like empirical understanding of the disease surveillance system, and that so we made these basic observations that are first of all flow on daily basis flow, and second of all, primary level is not very much...sort of like connected to the internet, and these three observations we wanted to then address with the help of the design. So it was really the empirical, let's say the expert team have send a list to the health centre that really allowed us to make these conclusions.

**R:** #00:13:01-9# so why did you think these issues are important?

**P:** #00:13:06-6# because they are very fundamental actually, so there maybe other issues as well, but these two are fundamental to make the practice a little bit more efficient. So we thought that the most fundamental ones so therefore they needed to be addressed actually.

**R:** #00:13:25-8# ok, so another question that is, because you said, this project if guided by user-centered design and also...so there are 2 different levels of the stakeholders involved in...who use the [the name of the product], the high level practitioners and the lower level of the health workers. so when you said there is some observation from the people use [the name of the product], so just like...so if we see the design process, so the first stage that is user study, is it right?

**P:** #00:14:12-2# yeah

**R:** #00:14:13-1# yeah, so the user study, so who is the user, the user is the expert from..in the university or the practitioners in the different district or the user that is health worker? I want to know the user study, who is the subject you studied on?

**P:** #00:14:40-6# yeah, that's a of course, it's a complex system. So we need to think about how the data is entered to the system and we need to think about who eventually gets information, and we also need to understand perhaps what are the other needs at the backend. So let's there is a manager in the data centers and so forth, so of course, primarily when it comes to

input, so we made an observation that it's mostly the paramedics that handle these. So that one user group in the sort of like a...the officers or the health workers who are typically already involved in the seeing in most paper based reports. So these group could be a nurse who has the responsibility or could also be the land technician that has this responsibility. And then second type of user is a person, an officer who is involved in the disease surveillance chain, so this could be a district level health officer, it could also be a national level or (some from the in-between level prop somewhere from that increased access egg level? health experts or authentic black?) surveillance officer. And then, thirdly, we have the practitioners or the doctors who are indeed working in this primary level or let's say even in the hospitals. So the ones who are indeed on the daily basis encounter with patients. So this is kind of the third type of user group, so because they don't have the reporting application of the other ones are practicing, and then they might...the information in order to better understand what is actually trending, what trends are prevailing in their perspective geographic?.

R: #00:16:33-5# ok, so what are the various aspects of the system your design team paid more attention to? and so for this question, I 'd like to know what are your interests in this project and what are the interests of your team members in this project?

P: #00:16:57-7# you mean the contextual factors?

R: #00:17:00-2# no, so this is the forth one, what are the various aspects of the system your design team paid more attention to? yeah...I don't know if this question can make sense to you because I 'd like to see what are your interests in this project?

P: #00:17:21-6# Sure, I think that of course when you look at the system itself...so what we needed to focus on was basically that input, and so we basically had addressed the...like the...somehow the is kinda like the data input challenge, so do a kind of the user report of like the literacy challenges that some paramedics may have. So shouldn't be a kind of audio based system or shouldn't be a text message based system. And so we designed base 2 different aspects, and then we also pay attention to the output of the information. So what we basically had was mobile client which was running on the mobile phone, which basically visualize the orient?...or sort of like active list? sort of interface for the access the information, the health information and our database included. And then of course, from kind of the let's say unconventional? point of view, so we also had to design the kind of a backend architecture. So basically the sort of like server side had to be designed as well. But that's a very technical design challenge.

R: #00:18:44-8# So I think these are about the technical aspects of the system, so did you have other concerns about the human aspect of the system? just like the user's or something?

P: #00:19:01-7# yeah, well I think that there is some that we focused on...I mean designed wise I mean we looked at that input and we also looked at that...let's say the output. So those were the...I think to us, the p-daster? essentially.

R: #00:19:19-1# ok, so what are the contextual factors that influenced the design of the system?

P: #00:19:34-6# good question, I mean as one aspect that we somehow was quite contextual was this...leader? was very social that we kind of like inform that...there were delete? language issues especially in most of the paramedics. So that's something that typically, especially if there is, you don't need to necessarily take into account that some of the users and to be able to

call like the operate database interface, but it seem to be....and also this localization I mean, I don't know the language but basically, not all like paramedic are able to coop with English. So we basically also has to figure out aspects of how to make the interface more suitable to somebody who only speaks local language actually. And so you might even have **defenses?** prefer language between the sort of doctor centre...the paramedic centre actually. So that was certainly went long time of contextual factor...I suppose we also needed to take into account to sort of like a legibility of like a aspect which has to do with transparency and also to some aspects even not be truthful about the observation regarding the disease surveillance statistics, disease statistics. Because I understood that the weekly reports that are sent to the district level. They have to always be the correct...**chetige?** how many disease cases were diagnosed in the centre. So so that..so so we basically have to face the issue of..maybe figures are not always 100% correct figures. It doesn't look good if **it didn't health centre?** actually **4-5-6 hours?** very high disease frequency type of location. So and compare to...and then discovered like daily reporting that we introduced. It was more micro level and changed....maybe changed a little bit of the dynamics of this kind of like that...of how they **dise?** entered and maybe there is no real challenge manipulate the actual record, so the statistics. But for this was an interesting contextual factor that maybe had to be taken into account. The third one I can sort of invent is the fact that even the sort of range of the device was bio-sensitive because we first gave a kind of a very flashy, nice looking high-end for the paramedics person that let that...turn out to this shining E-71 was perceived to be a kind of a form which may attract lightings because it's shine, it's actual the **wide standards?** form. so so maybe it gets, maybe treat by lighting. And it's also very less expensive, so so the paramedics doctor was little bit concern to use this kinda high-cost mobile phone. And therefore, we designed it that we have a low-cost mobile phone as the data entry phone because it's probably more suitable for the paramedics. However, the doctors were happy to use this model phone, and we stack to the E-71, the high-end version for the doctors. But pretty interesting contextual factor that you only discover this when you actually start running the actual (tryout) filed trial and when you (redirected) interact with the user (approach).

**R: #00:23:51-2#** sorry, I missed the second factor

**P: #00:23:57-9#** Ok, the second was the language, not the language, but was the more the sort of like the data itself. So one contextual factor was that the health...we understood that the health centre are always want to...let's say if they..if there is a large number of Malaria cases started in one week in one place. So maybe the person now don't want to send this information to the health centre, to the district level, it's difficult because the health centre would actually not look so good because they have a high incidence of disease cases. So maybe there is a tendency or there might be at temptation that the staff to change the statistics to make the centre look better, so to basically reduced the doctor. So if you find 80 cases of Malaria, maybe you make it look like you only have 40 cases of Malaria, because you don't want your centre to look bad.

**R: #00:25:08-7#** so how did you find this factor because it's really interesting? how do you know they don't want to report?

**P: #00:25:18-9#** this was very difficult to verify, and we don't...we only have anecdote level so so we basically talk to the experts who were involved in the system, and especially on the hospital side and the academic side, that they suspect that this might be happening. So so this is by no means like a..there is no system and evidence for this, this is more like kind of a qualitative finding that's coming from the...let's say the interactions with the experts. And then if comparison the [the name of the product] system because they are...you report on the daily

basis, and then it may mean that you don't really have a chance to make this statistics look better, so you don't think about it too long, so you just enter the figure and then send it out, so so our hypothesis is that the data is more reliable when it's enter with the mobile phone because it's a...the cycle is more rapid basically. but we don't have evidence for this, this is just a **hunch** that I have.

**R:** #00:26:36-4# so because my research that is focus on designer's personal life experience, and I also give a...I think it's a simple definition of this term, so I am wondering did you incorporate your personal life experience in this project?

**P:** #00:27:00-2# I think it's a very difficult question, I mean just the first one, I mean I can give you some answers but I think because everyone has...every person has **ease just depends the areas or determined by your hostic experiences?** so so it's very, I mean one could argue that in anything you do...in all kinds of decision making, I mean there is a **sudden personal experience?**, personal life experience., actually has, I mean it's a...I think it's a very difficult question because there are many things...I am sure that there are many issues in the way I was being lead in the project and also in the way others were operating, where you can see some influences from their past life experience, let's say their personal life experiences, but I would still say that maybe I just at least leave couple of points here that maybe are more about this personal life experiences. And I think one aspect I can definitely see here and which has maybe also being visible in the project is that I have a kind of a sensitivity to interact and also like to understand different types of cultures. So in my past life, I mean in my past, I have lived in several different countries, I have spend a lot of years in the UK, and then in the US, in Finland and then in India. And I had also done some user research in several lot of countries like, let's say China, and Brazil and so on. So all in all. I would say that I have...in the course of my life, I mean I have acquire this kind of like interest towards so also like sensitivity to different types of cultures. And partially, this is also visible then you can see in this [the name of the product] project.

**R:** #00:29:19-3# ok, so you mean the sensitivity to different cultures? so how did this...how did your sensitivity to different culture help you make the different design decisions in the [the name of the product] project? I think this is just general, it's not focus on one design decision, but can you talk lot more about how this help you to make some design decisions?

**P:** #00:29:47-6# Well probably, I mean, just first of all, the...I mean let's say as a leader of the team, so I have a possibly in daily given time to choose projects which would be then happening under my supervision. And I have a choice to select projects that don't require necessarily you to go along with the...let's say do research in the context that maybe very different from your own and in this particular case, what we did before start, we...for many...I mean of course in daily given time, we have many choices or we have many possibilities, and but we chose to develop this system for rural area in India. Let's say...well in this case, I mean it was a rainforest **the day every on the course?** of India, and this is a kind of culture where even my own, research team members were not used to living in. So I think this kind of like a...I was very **tempted** and maybe there was **a low press hold?** and a kind of a preference for me to select this kind of project for my team because I have kind of a natural tendency to orient works, a lot types of geographies and societies. And so in this case, we decided to start something which was very far away from the traditional environment that all of us were used to operating in that and researching. And certain factor that I can think about in addition to the sensitivity contrast, is kind of a personal life experience where I have come to notice that when you are making decisions, at certain point, I mean, you can not over analyze things and because life is never **birth?** and you never have proper resources or time to analyze something like a over and over again that perfectly understand something. And therefore, sometimes it's really about making a kind of a....it's really



about sort of like a...making some pragmatic decisions of now we do this and we look at what happens, and similarly, in this [the name of the product] case, so there was a sense of pragmatism in a sense that we...most likely we didn't have a...the timing of the project was such that we didn't have full time to kind of like conduct...let's say systematic research...let's say 6 months doing ethnographic observations into the...into this disease surveillance system. But it was a little more pragmatic and little bit more fast paced. And this kind of project often typically in that **comfort?** research where you don't necessary have like a **handful?** time to make decisions. And so what we needed to do is base on the sort of like a...I mean I am not saying that we didn't do research into the sort of like a phenomenon and into sort of like a system that...let's say we...of course as an essential, we have the experts interviews and we went to the site to study this health centre and so on. But still, we probably didn't have like a kind of a 360 degrees understanding of the environment, but we kind to had to some extent, sort of like a base on this contact information that we had, make decision that, ok, this is what we focus on, and so I would say this kind of like pragmatism, and sort of like to kind of like a from certain amount of understanding, you need to then have a confidence that, ok, this is now enough. And now we trust that we know enough and we jump to the conclusions and then...we make...we start actually sort of like developing something. So, this probably comes from my past, let's say especially the professional is being insist that I have worked in a corporate research for 10 years. I have an academic background as well, so I would say that this pragmatism is unfortunately sometimes, sometimes needed also in...also in the academic research that one does. So that's one aspect. I am happy with this because I mean this came to my mind before the interview and i can think some other factors but I now in these 2 factors that I can easily think of.

**R:** #00:35:18-9# Sorry, what do you mean?

**P:** #00:35:21-4# I mean these 2 factors are something that I could come up with, is this enough for you or are you...would you like me to...think about some more?

**R:** #00:35:32-3# yeah, no problem, I think these 2 factors, I think it's important, so you can quickly come up with, so no problem. and, so can you give some comments on designer's use of their personal experience in the design practice or their research practice?

**P:** #00:36:01-8# sorry, can I give some comments on how I use this?

**R:** #00:36:11-7# no, I think, so this is can you give some comments on designer's use of their personal life experience in design practice and you can talk about, you can give some comments from your own perspective or you can just, from a general level to talking about what's your ideas and what's your opinion about designer's use of their personal life experience in their design practice because...So the reason why I 'd like to know your comments, because in the HCI community, most people, they reject the subjective aspect from the designers because they advocate the objective research, objective design approach. So I 'd like to know your opinion around designers use their first person...use their first personal life experience in their design practice.

**P:** #00:37:16-7# ok, you'd like to know what my view is that...in this argument. True, yeah, I mean I think certainly it's a...it's very difficult to...of course my understanding is kind of like a...this notion of traditional in a kind of the...you have these...let's say some kind of like objectives...tradition where we assume that...I would say it's positivistic tradition to **science?** where my...we have the subject which is studied and we have an object which is..or I will say the subject studies the object, so the object is something we want to understand then we can

objectively understand and study, and then the researcher is suppose to be a kind of the...like a...is not of course, I mean...the personal background of the researcher should not influence the measurement results, so to speak, this is the tradition view that we can observe certain phenomenon and our personal life experiences...are do not...should not have a influence on what is studied. But I don't think, I mean especially when you go to qualitative fields, so I certainly don't think that this can be true. I mean you always have a certain framework and certain background with (buys?) best the way you are orienting in your research. So what **ornatance?** research directions, but you are drawing or....I mean you always....if you think in many thing...many ones you have the decision to do....let's say I have basic interest study **in your be...?** and my personal life experiences leads me to prefer A for instance over B, so often I was in the selection process or your personal background might influence your decision making actually. Like a we have been studying a certain topic or a certain another one, I mean that's one example where it clearly happens. And then the other thing is that, our kind of like personal background most likely has some influence also in the way we...let's say...some kind of like the....we may have a certain knowledge about certain things, so there is kind of a cognitive level or like a level related to what we know already from beforehand, which influences the way we interpret the sort of like data. So sociologist, even sociologist use this term sensitized lenses, so everybody is suppose to be viewing a certain topic with certain lenses, I mean depending on...depending on your research background, you have certain lenses. But also depending on your personal background, you will be analyzing any certain thing to data in a certain way. So there are certain traditions in sociology where this is actually, where this is sort of like taken as grounded. And but there are also some methods which maybe use to minimize the influences, that the background of the researcher has, even in qualitative research. So for instance, grounded theory is one area where the influence of the personal or subjective background of the researcher is...this influences are minimized by a **blind this kind of quality theory?** , and then there is this framework, which is very systematic and then **pop them up?**, and then so there are certain **attempts** in the qualitative research domain where these personal experiences...the role of personal experiences is minimized or the scientific community wants to minimize this. So I would say that certain this things do have an influence and the...but you can also like do certain things to minimize the influence if you know what are they?

**R:** #00:41:56-0# ok, this is from the research practice, so what do you think about the design practice?

**P:** #00:42:04-1# well design practice itself, I mean, sometimes it's difficult to differentiate between...let's say if you do user research, so it's basically design a lot...it's suppose to be labeling design in later stages, but still, if you look at design. So I think there are...the meaning of design..what the most intriguing part of design is that you need to, at some point, you have certain facts, let's say you have the findings of user study and then you need to lead into the design solution, like, so so from the background work and then from the information that you have available. So it might be that you have information about...or you understand the user group that you are designing for, or you understand the phenomenon that you have been studying, and then you can lead to the design solution. At this point when designers making the leap from the information and background information to the actual design solution, this is actually something which is.. which can not be really formalized, it's intuition. And it's somehow there is something need almost like magical about it because you kind of like a...you need to make this shifting your mind, and it's only to some sort of very intuitive process that this happens, and then we can not even...there is subconscious..which is kind of like a...I mean designer works even in the subconscious manner in order to make this transformation from the texts to the design solution. And to certain extent, it's really defining sort of the...let's say research that you having been doing....let's say I have land on user research on disease



surveillance practice in India, and this is the information that I have available to make the design solution, but you also have the personal life experiences that influence the..this leap that you are making to the design solution and because this process is....to some extent, it's not fully conscious. It's about the intuition and subconscious processing of your mind, so it's very hard to say, that ok, what is the...to what extent...to like propose what is the proportion of my past experiences that influence my design decision or design solutions, but I do believe that your personal background has some...has some contribute to this process.

**R:** #00:45:01-8# ok, thank you, I really like your point.

**P:** #00:45:07-5# yeah, I don't know if it makes sense, but this is my own, my kinda feeling that there is something magical and intuitive that can not really be described in formal term of some kind because of this intuitivity or because of the fact that the subconscious is also involved in the decision. So you can not really quantify how much your personal life experiences have or....but I mean I firmly believe that they do have an influence.

**R:** #00:45:37-0# yeah, I think it makes sense.

**P:** #00:45:41-0# yeah, I mean that's somehow, something that's a kind of an opinion that I already have before this interview, so it's something that I often thought about, and it's interesting that it actually applies to your research questions as well.

**R:** #00:45:56-0# ok, thank you....if I have further questions, may I email you?

**P:** #00:46:32-8# of course