**Female, a quantity surveyor, 25, living with her family and pets**

Interviewer: We are a group of students from University of Southampton Malaysia and we are facilitating this focus group interview to research more about the smart home systems from the user’s perspective. The goal of this interview is to gain some valuable insights from the potential users of this system to enhance the usability and user experience of the aged care system. You have been selected as one of the interviewees as you have been identified as a potential user that might provide unique opinions on the smart home area. Our research project as a whole focuses on the interaction design of smart home technology, with particular interest in the area of automated pet care and aged care systems. Prior to the interview you will be briefly introduced to the topic of the interview and you will be required to sign two consent forms (one to sign and return and one to keep). The interview will take approximately 15 minutes and it is semi-structured.

Participant: Ok. Understand.

Interviewer: Do you understand what a smart home system is?

Participant: Yes because I saw a lot of owners using the smart home system for their new home.

Interviewer: Can smart home technology significantly improve the quality of care system? Would you use it for your parents and why?

Participant: Yes, I would use it for my parents because they actually reduce some of my burdens when taking care of them during the time I am not at home.

Interviewer: Is customization a key feature in smart home systems for personalized aged care? What would you like to customize and why?

Participant: That’s good because it can set a reminder function like give a reminder to old people and my parents to take medicine when I am not at home.

Interviewer: What do you think should be a priority when designing a smart home system for old people? Why?

Participant: Definitely it should have a sound-based system to have voice control because old people now know Mandarin and dialect more, so the voice control of the smart home system should include the voice control through dialect. And also the bigger font of the apps.

Interviewer: Could you name a few challenges that could be addressed by smart home technology in aged care? Do you have any suggestions to overcome it?

Participant: The main issue I think is that aged care system for the people used to take care of the elders, parent to take care is ok. The problem is when you need to apply this smart home system on your parents like your parents need to take medicine when you are not at home, they don’t know how to stop the alarm or the reminder on the apps.

Interviewer: What are the features that you would find useful or would be interested in for an aged care system? Why?

Participant: Why they will have the feature…okay.. Actually it is convenient for the elder/old people to control it and help to remind the old people to take medicine, then to go take shower or do something.

Interviewer: What is the most effective notification system that you could think of for elderly users? Why?

Participant: Voice-based system because it can speak out and remind people like using voice, not a sentence on the screen.

Interviewer: Imagine a futuristic pet care system for smart homes. What sci-fi feature or capability would you love to see integrated into this system for your pets?

Participant: Definitely it should help on feeding, grooming and cleaning, and taking a bath because it is a dangerous(challenging) action to the pet owner.

Interviewer: If automated pet care systems were designed to be sustainable and eco-friendly, what features do you think it could incorporate to maximize energy efficiency or reduce their environmental impact?

Participant: Pet owner have a very struggling problem because they have to clear the poo and crap, so if the smart home system can help to convert to the poo become the organic fertilizer should also can help to reduce the pollutant.

Interviewer: Do you believe that the use of automated systems would throw off the balance of you and the system providing personal attention and care to your pets? (Are there ways to improve this balance?)

Participant: I think it is half half because machine only can provide the physical need but the mentallt need is cannot replace by machine and the system.

Interviewer: Are there any concerns you have regarding the safety and well-being of your pets when relying on automated systems in a smart home?

Participant: Yes. They will wait in front of the feeding machine; they will not request the need from the owner. And then they will attack the feeding machine if they are not fulfilled their feed

Interviewer: Can you suggest any specific enhancements or new features that would make automated pet care systems more valuable to you as a pet owner?

Participant: Yes, definitely I need the translator because I have a various type of pets like the fish, cats and tortoise. I need to know more what they want and what the need. Because the fish is just keep quiet and swim,swim. I don’t what they want and that’s the problem.

Interviewer: What type of biometric authentication do you prefer (Fingerprint, face recognition, password, access card, key)? Why?

Participant: I would prefer eye recognition because it is convenient and fingerprint maybe affected when I touched the verification path, they may have some dusts which may affect the working and also the face recognition will not look like same everyday as girls got make up and emotion also affect the working.

Interviewer: Are you comfortable sharing your personal data with the smart home system? If yes, then will you allow it to record your daily activities? If not, then why?

Participant: Actually it is half half because I don’t concerns share my privacy on online websites. But to enhance the system to make it better, it is a need, compulsory as I share the data like the challenges I faced is every morning before I go work every day, I don’t have enough time to prepare my breakfast and don’t have enough time to do some household. If I can share the data to the system, maybe it can help to enhance and control the time limit like it can help to prepare my breakfast before I go working before ten minutes I go out from my home. I can control the vacuum machine everyday from 10am to 12pm because the system will know that this time won’t have people in my home, it can directly control the vacuum machine working.

Interviewer: Do you prefer your smart home system to have a children-friendly mode? Why? (PS: children may lead strangers to their home without parents’ permission)

Participant: First, I don’t have the child. And at the second, I NOT agree and I don’t prefer to let the children use because they may trust in strangers and scammers, then I cannot control. What if they use my account share my data to scammers. What if they use my e-wallet to buy something. This is dangerous and uncontrollable.

Interviewer: What do you think a smart home system security feature should include? Why?

Participant: The motion detector system should be included because when stranger is approaching my house and try to get into to my house. I hope that the system can detect the motion that people get in my house and then send notifications to my handphone, so I can know that someone get into my house and I can call police at that time. Not like after I go back home and I saw and I found it, then I try to call police and also what if can give the warning like ring the buzzer to alert them and my neighbour and then the strangers will get out from my house.

Interviewer: How much control do you want your smart home system to have?

Participant: No matter how much system in my house. I just want to control everything through my handphone because now handphone is the necessity in my life. I just need one clip to control everything. That’s all. Simple and easy.

Interviewer: In your experience, what are some effective design patterns that could enhance the security of smart home systems? (answer some specific questions, setting primary user,…)

Participant: Usually people just open the app and do control smart home system. If I cannot sign in and log in to my system, there is an error of the system, maybe they can do double or triple verification like setting up bio-data like fingerprint, and second gmail verification and third it can use like answering the security question because like we have three verification then the people not easy to access and entry to pass my system and control the things because it could not.

Interviewer: Thank you for your time and valuable input. Is there anything you would like to add that we haven’t mentioned?

Participants: Okay. From the questions, I can find that the systems are potential like the pet feeding system because nowadays a lot of people feeding pets and then they not just one pets, two, three, four and also got so many type of pet like fish, turtles and cats. Just like I said just now, they can feed them in one sound on the same time, so they improve the system make it easy to use. And the last one they should include the security system, which is the most important one.

Interviewer: Thank you so much.