

# **User-Centered Design 2020**

## **Demo 1\_2**



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## **1. How has the user interface development and research changed from 1950's to 1990's, according to Grudin?**

At the beginning of the era of computers, the main focus was hardware development. According to him, simple processing benchmarks were the critical measure of new products. Hardware was the most profitable and undeveloped field in these decades. Hardware components were very expensive. So, companies kept working on hardware to develop also gain a bigger profit. However, this changed with software. The main focus was the programmer's interface because the thought was better programmer's interface means better user's interface. Then, They start to improve user experience with color, bit-mapped graphics, sound, larger, display, windows, other capabilities to become more widespread. Grudin defines that "level 3" perceptual-motor and cognitive results are being refined, extended to larger screens, incorporating colour and sound, and responding to other technological advances, substantial "leading edge" research in human-computer interaction. After then, the interface was substantial for the social or work environment.

## **2. Describe how Grudin understands "user interface". On what grounds does Grudin use the concept in the way he does?**

He defines that "user interface" is a technology-centered term: the computer is assumed, the user must be specified. Furthermore, he thinks if we position ourselves at a distance and think about computer interface to the user and the world, it goes more reasonable. Because we believe that the number of unresolved design questions is daunting. Therefore, he suggests that at the same time with developing, if users get a chance to design their platform design would be a tremendous change.

### **3. What are the challenges of interface design in Grudin's opinion?**

Early years of computers, interface design kept only for programmers and engineers. First of all, according to him, the first challenge is limitation such as physical memory size. Also, primitive hardware, computer time and word processing were expensive. He mentioned that the programmer's interface needs to develop before developing to user's interface. Early software era, interface kept also for programmers. After enough development, the main topic shifted for the user interface. Continuing the user interface, it ended with level 4. But, progress on the higher cognitive issue of level 4 is relatively slow. Nowadays, the main issue is that social or work setting. There are some challenge to this. Some people do additional work because sometimes they can not perceiving direct benefit from it. It may disturb traditional and political habits. It may not allow problem handling and improvisation. Developer's sense may poor for multi-user applications. Additionally, it is challenging that learn user experience because of the difficulty of analysis and evaluation.

### **4. Grudin wrote his article in 1990. What has happened during the past twenty years and how do you think it has changed development and research in the area of software design?**

I believe that over the years, software design has changed for more individual user experience without any hardware or software differences. Because, when we think about products, we realize that they almost seem similar to each other regardless of hardware or software. Companies compete for the best user experience they can give to the users. As a mobile operating system Android, always keep the same with all smartphones. However, the companies try to gain users from the experience they provide. For instance, Netflix paid \$1 million dollars to its suggestion movie algorithm to its users. Also, They try to get attention to the different movie posters for different users according to their movie enjoyment. Moreover, social media companies like Facebook provides a individual timeline for each user. It shows that software and even hardware design for individuals is very important this decade.

## **5.What is the most important message that you learned from Grudin's article?**

The most important message that I learned is each level has a unique challenge for own. These challenges come from our understanding of the world and our desire. As humankind, we progress one by one. Each progress requires more work and a deeper meaning. While we research more deeply we come across with bigger challenges and we need more time to handle these challenges.