Mr. Toru Nagasaka, Session chairman

Our last speaker is Dr. Doi. She is a senior fellow of the Research and Development Center of TOSHIBA. Dr. Doi be so kind to start your presentation.

Dr. Miwako Doi

Thank you, Nagasaka-san.
Good morning ladies and gentlemen.

My name is Miwako Doi from TOSHIBA. I think it an honor to do this invited speech today and I welcome you to Japan.
Japan has a long-established tradition. Before my speech I introduce to you a short traditional Japanese comic storytelling Dakugo.

A passenger talks to a person who is fishing in a pond. The passenger asks: “Did you get any?” The fishing person answers: “No, not at all. I have had the line dropped in for three hours, but not a bait.”

The passenger says: “No, I mean this is just what is left over from yesterday’s rain.

Before we go fishing we must confirm whether there are fishes in the pond. I hope today that my speech will be useful for you to find fishes.
Today, I will talk to you about three topics on information appliance computing for a better life.

Firstly, I will introduce to you the history of Toshiba home appliances.

Secondly, I will explain new visions of customer’s value to be provided by Toshiba such as surprise and sensation, safety and security, and comfort.

Lastly, I will speak about the future visions of customer’s value from our research work.

The future visions are mostly equal to the new visions of Toshiba except for communication.

The Chinese characters Kan, Ken, Ryo and Han represent the visions according to comfort, safety and security, surprise and sensation and communication.
Let’s start my talk with the history of Toshiba home appliances. Therefore we access the Toshiba Science Museum page in the Internet. Toshiba has developed numerous pioneering electronic products that represent firsts of their kind in Japan or anywhere in the world.

1890 Ichisuke Fujioka and Shoichi Miyoshi established Hakunetsu-sha & Co., Ltd in Kyobashi, Tokyo. They manufactured Japan’s first electric incandescent lamps in 1923.

1930 Manufactured Japan’s first washing machines and refrigerators.

1931 Released Japan’s first vacuum cleaners.

1940 Manufactured Japan’s first fluorescent lamps.

1955 Released Japan’s first electric rice cookers.

These washing machines and rice cookers relieved housekeepers from the hard labor at home.


1959 Completed Japan’s first transistor televisions. Developed Japan’s first microwave ovens and helical-scan VTR.

1996 Introduced the mini-notebook personal computer: Libretto. Introduced DVD video players and DVD-ROM drives. This year we introduced HDTV.
In this way, Toshiba has developed many products as the first company in Japan and in the world.

Before moving to the next topic, I introduce the Japanese home appliance market size. The Ministry of Internal Affairs and Communications estimated the home appliance market in June 2004.

This graph shows the estimated Japanese domestic home appliance market.

The market was estimated in three categories. The blue color indicates the network platform, the violet the appliances and the yellow the service and contents.

In 2010, the total market is 11 tera yen, about $85 billion, 4 times the market of 2004.

Also, the appliance market of 2010 is 4 times the market of 2004, the service and contents market of 2010 is 8 times the market of 2004. So the service and contents are regarded more important than appliances.
The market is growing like this.
Fortunately, Toshiba Group marks its 130th anniversary this year.
Hisashige Tanaka, Toshiba’s founder, was a prodigious inventor, known in his own lifetime as “the genius of mechanical wonders.”
His telegraphic equipment brought modern communications to Japan.
The passion and spirit of enquiry that inspired his inventiveness, and his commitment to technological innovation and progress, are Toshiba’s heritage, its corporate DNA.
Incidentally, today’s second topic is dealing with the new visions.
Toshiba will commit to the realization of the 3 visions of customer’s value: Surprise and sensation, safety and security, and comfort.
I introduce the products according to these 3 visions.
These products, HDD&DVD recorder RD-XS57, AV note PC QOSMIO, and digital TV Face, provide consumers with surprise and sensation by the high resolution picture and natural interface.

Consumers can operate AV note PC QOSMIO using not only a mouse but also a remote controller like TV.

With the digital TV Face one gets not only the digital TV broadcast but also the broadband broadcast “4th Media”.

Using an HDD&DVD recorder, you can "Copy/Move" videos between the HDD and a DVD-RAM easily. It's as simple as making a file copy. And the HDD&DVD recorder connects the Internet and gets TV programs recommendations like books recommendations by amazon.com.

In the near future, these Digital TV, AV note PC and HDD&DVD recorders connect each other by the DLNA (Digital Living Network Alliance).
The second vision is safety and security.

The biometric identification, FacePass, recognizes a face and authenticates. FacePass is installed in gates of multifamily housings in Tokyo.

In the networked FacePass, the face is registered on one FacePass and then the registered face pattern is distributed to other FacePasses via LAN.

The health care system, named health guard network, connects the home and the doctor. The biomedical data, electrocardiogram, blood pressure, and so on, are measured at home and transferred to the doctor. The user can get the health counseling at home using the health care network.
The third vision is comfort. Life-electronics, e.g. refrigerator, washing machine, air conditioner and so on, are providing delighted, comfortable and a happy quality of life.
Toshiba is probably the first company which commercialized the networked home appliances named FEMINITY series. Each appliance is equipped with BT, then through Access Point, they are wirelessly interconnected with each other.

The conventional appliances provide convenience to users so far. We expect that the networked appliances can provide much better intangible values of Entertainment, Safety and Comfort to users.
Like this way, Toshiba manufactures products based on the 3 visions; surprise and sensation, safety and security, and comfort.

Now, I will move to the last topic, the future visions of customer's value; Kan, Ken, Ryo and Han.

The future visions are mostly equal to the new visions of Toshiba except communication.

Kan corresponds to Comfort, Ken corresponds to Safety and Security, Ryo corresponds to Surprise and Sensation.

Han means communication.

Based on these future visions, I will shortly introduce the research works.
An example of future comfort is the gestural interface. Did you watch the movie “Minority Report”? In Minority Report, Tom Cruse handles the information directly using the gestural interface. Tom Cruse wears the special gloves whose fingers are covered by white balls. Toshiba researcher can control the light and the air conditioner by arm motions. Instead of Tom’s gloves, the Toshiba researcher wears a wrist watch type sensor named LifeMinder.
A 3 dimensional acceleration sensor of LifeMinder can identify the motion of arms and controls the air-conditioner and the light.

LifeMinder can measure not only the motion but also the pulse wave, body temperature and galvanic skin reflex (GSR). Based on these physical data, LifeMinder gives health care advices to the user.

LifeMinder is an example of the future comfort (Kan) and safety and security (Ken).
The flatbed 3D display is one of the future surprise and sensation works. A new display technology allows 3-D images on a flatbed display without special glasses. Viewing the display from an angle, 3-D images stand out several centimeters from the surface of the display. The new technology opens up new areas of application for 3-D displays, including arcade games, e-learning, simulations of buildings and landscapes and even 3-D menus in restaurants.

Now, I will show to you the Flatbed 3D display movie from TOSHIBA R&D Center PR DVD.
The last vision is communication (Han). Communication is elementary for human beings.

Japanese robots like ASHIMO, AIBO and others are famous.

Toshiba develops a robotic information home appliance named “ApriAlpha”, Advanced Personal Robotic Interface Type α.
We join the project Ubiquitous Home in NICT (National Institute of Information and Communication Technology).

The ubiquitous home is located in the south of Kyoto and we make a research for communication aids using ApriAlpha in the ubiquitous home.
Ubiquitous Home

This slide shows the living room of the ubiquitous home. The ubiquitous home has 2 rooms, a living room and a dining kitchen. Networked cameras, microphones and other devices are installed at ubiquitous locations. Displays and speakers are positioned to show multimedia contents. RFID systems and floor pressure sensors detect position of humans.
Here, we demonstrate the communication between human and a robot at the ubiquitous home.
Summary

History of Toshiba home appliances
New Visions of Customer’s Value to be provided by Toshiba
  > Surprise and Sensation
  > Safety and Security
  > Comfort
Future Visions of Customer’s Value 簡健良絆(Kan, Ken, Ryo and Han)
  > Comfort(簡 Kan)
  > Safety and Security (健 Ken)
  > Surprise and Sensation(良 Ryo)
  > Communication (絆 Han)

Thank you.

Now, I must wrap up my speech.
Toshiba has developed many products as the first company in Japan and in the world.
In this landmark year of its 130th anniversary, Toshiba reconfirms its mission to contribute to society through value creation.
Toshiba is committed to serving customers with the best products and services for the times. This reflects our constant dedication to three guiding principles: "Surprise and Sensation", "Safety and Security" and "Comfort".
And in addition to these three principles, communication is important for the customer satisfaction.
Toshiba researchers work for the future visions Kan, Ken, Ryo, and Han.
Today I show LifeMinder, Flatbed 3D display and ApriAlpha. They are only a small part of our research work.
I hope you will catch some big fishes in your business.
Thank you very much for your attention.