



## ***Building Technology for People***

***Speech by Mr Johan van Splunter  
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Good Afternoon, ladies and gentleman.

It is a pleasure to be with you today at such a prestigious gathering of our industry and at such an exciting time in the world of technology. You might be curious that I say the times are exciting since we have all had such financial difficulties over the past year and perhaps for some time yet to come. Despite technologies' slump, and perhaps because of it, we are looking at a great future for innovation.

Philips has been at home in China and this region for more than half a century, and we very clearly see this region as vital to the future of innovation at Philips and in the world of technology.

I want to show you a glimpse of this future, an Ambient Intelligent future.

How do we get to this future vision? We have to address:

- cultural and social differences
- multiple device convergence
- industry standards and consolidation
- the impact of globalization and
- frankly... consumer and investor trust...

How does Philips address these areas?

1. By studying the cultural and social aspects of what people want and need from technology through our research, such as in the HomeLab I just showed you, in order to create meaningful innovations.
2. We align with companies and partners to create new product categories and reach new consumers – For example, the recent cooperation with TCL to focus on high-end TVs in China, the partnership with China Electronics Corporation(CEC) on the R&D and manufacture of corded and cordless phones, the opening of the world's first fifth-generation thin-film-transistor LCD fabrication plant with LG.Philips LCD in Korea, the set up of LG.Philips Display in Hong Kong, and Systems-on-Silicon Manufacturing Co., a partnership between Philips, TSMC and the Economic Development Board in Singapore.



3. We work to create common standards that facilitate growth and innovation and at the same time, make it easier for the consumer and business partner to use technology. We believe that open technology standards are vital to creating a connected world that benefits consumers.
4. We do our best to be good local citizens as well as good global citizens. China is poised to accept more business coming into the region ... we all need to rise to that challenge and become sustainable corporate businesses that meet consumer and investor expectations in a responsible manner.

### **Importance of Innovation**

We are only just at the beginning of the digital revolution...and we have some way to go. But before we go to the future, please allow me to take you back in time for just a moment. In 1891, brothers Anton and Gerard Philips founded what was a very high tech company of its time—a light bulb factory. They developed the light bulb from an experiment...into a common household item. When their light bulbs became successful, they decided to enlarge their scope from only making light bulbs to everything electrical or electronic. In the 1920's, the cutting-edge technology was radio, and that's where the brothers began their success in consumer electronics and radio, meaning sound and music, then came movies and television, adding vision to the sound.

The digital revolution we are now embarking on will be at a speed not seen before in the history of technological development. I can tell you, Philips is ready for the challenge.

Philips is 60,000 employees strong in Asia (that is roughly one third of Philips global workforce) - in manufacturing, in product creation, design, marketing, research and development, in having regional competence centers and in joint-venture partnerships. In China alone, we have about 30 wholly-owned enterprises and joint ventures.

And, it is here that the future of technology innovation has its greatest potential. China and Asia Pacific will be leading technology innovation. It is the markets in this region which are already innovating, already leading on development and perhaps more importantly, on utility of the technology. You can see technology leadership in the region in DVD-RW and Gaming Software, D-RAM, Wafer Fabs, miniaturization, connectivity with SMS, WAP, and internet downloads on wireless hardware, and applications that are revolutionary for the rest of the world's consumers but are 'everyday' for the Asian consumers. The markets of Korea, Japan, and Hong Kong, for example, have fostered cultures which embrace technology and have become the trendsetters for technology. Philips is actively driving developments from this region - bringing leading-edge technologies to market first, and enabling our customers to deliver services tailored to market expectations and aspirations. No longer will Asia Pacific be looked at as just a low cost production center, but will transform increasingly and rapidly into the drivers of key technologies for our future... and with people in mind.



Today, Royal Philips Electronics globally is

- active in about 60 businesses, from consumer electronics to domestic appliances, from diagnostic medical imaging to semiconductors
- a world leader in digital technologies for
  - television and displays
  - wireless communications and speech recognition
  - video compression, storage and optical products
  - and the very important semiconductor technology that makes these breakthroughs possible.

We have leadership positions,

- with 2.5 million heart procedures on diagnostic imaging systems carried out each year using our technology
- one in seven television sets worldwide contains a Philips picture tube
- 60 percent of all telephones contain Philips products
- 65 percent of the world's top airports are lit by Philips Lighting, as are 55 percent of the world's soccer stadia
- and, each day, our factories turn out more than 50 million integrated circuits

We are ready for the next technology challenge and it will also be driven from Asia Pacific. The products are there. The technological competence is there. The markets are there. The desire and the vision are there. We now have to put it together in a different way...an innovative way...and we have to do it in partnership.

The Philips brothers were innovators and entrepreneurs who succeeded in business while improving people's lives. They believed that by daring to make choices that improve the lives of people both inside and outside the company, they would be successful— not by coincidence, but by design.

This is the philosophy that is showing us the future.

## **Innovation for People**

People have a fundamental need to stay in touch – be social – and to stay in control to be most comfortable. People interact with technology practically every second, often without realizing it. Only by appreciating how these interactions take place can we enhance our customers' experience of them. We must use these “moments” to listen, learn and create. Integrating natural interaction into a technology device will be increasingly important, even critical. We know that personal technology is most quickly adopted when it serves people's needs without requiring people to be “good at managing” the technology.

Today, we are leveraging convergence, digitalization, the internet, and especially connectivity, into an even more exciting future...and it brings us all to the edge of this digital revolution.



So how will the future look? As we, the industry, figure out how to bring the right products to market at the right time – how to innovate with people in our minds – the answer to this question becomes more clear.

Understanding our customers, trends and consumer behaviors will give us the competitive edge. Philips holds roughly 75,000 patents and spends about 7% of our annual sales on R&D initiatives, even in down times...it keeps us on the edge of innovation and in front of our customer... In 2000, we opened the Philips Innovation Campus in Singapore - the 2<sup>nd</sup> largest facility outside of Europe, hosting the global product center for LCD Television developments. ...no doubt, these investments have served us well.

We have taken an active approach to researching people's interaction with technology, creating environments and putting people in them...studying to understand how they react so that we can make an Ambient Intelligent Future a reality.

## **The Ambient Intelligent Future**

What is ambient intelligence? It is an environment where digital technology senses what people want, through interconnected and personalized interfaces embedded, invisibly, around us. It responds to our natural speech and movements, through touch panels, sensors, or even intelligent cameras that track the movement of our eyes. Ambient Intelligence integrates technology into our environment, so we can use it freely and interactively. We see the beginnings of ambient intelligence today. More and more products have become smarter and smarter.

## **Technology in the Home**

Today we have a state-of-the-art research project – the Philips HomeLab, a unique research facility that will revolutionize how people interact with technology. You saw a glimpse of it on the video clip I showed you earlier. For many people, technology is both a curse and a blessing. For every gadget, there's a confusing instruction book. For every web page, there's a crashed computer. And for everything new, there's something suddenly obsolete. In short, the technology we use asks too much of our consumers. Not only that, but in an ideal world, we wouldn't even have to think about it – this is what the Philips HomeLab is all about: The Ambient Intelligent Future.

Situated in Eindhoven, the Netherlands, the HomeLab is a home in more than just name; people can live in it for weeks at a time. And, it's a laboratory where everything that happens can be recorded, observed and learnt from. Our observations and work in the Lab will answer two basic questions; "Do people want it?" and "Can we build it?"

We believe this 'technology for people' approach is the path to an Ambient Intelligent world where digital environments are sensitive to people's needs, personalized to their requirements, anticipatory of their behavior and responsive to their presence. This is an evolution that we want by using competence that we have and by bringing them together, we improve people's lives - whether at home or at work



We expect to see a few new attributes in the home of the future:

- Access to medical care through remote monitoring or telemetry – home doctor
- Sustainability, security and energy-savings – pre set climate controls, energy management and mobile security checks
- Education and information – schooling, research, online libraries etc
- Entertainment, creativity and pleasure – bed-time story channel, multiple music channels in each room where the music goes with you

Then there is the ‘Smart Mirror’ – central to the ‘smart bathroom’, which uses a camera and scale to recognize you, and even say ‘hello’. The mirror itself gives feedback on your health, perhaps gently reminding you to spend more time at the gym. It can show you how to make better use of your electric shaver and warn you when it needs recharging, while projecting television pictures, your schedule for the day, web pages, or even an educational cartoon for kids to help them brush their teeth better. The ‘Smart Mirror’ has applications beyond the bathroom, anywhere a combination display and mirror are useful..... windscreens in automobiles, mobile phone displays, clocking in for factory workers, an array of security applications – file control, building access, devices for bomb searching...

It is not just the home that will benefit...

## **Technology in the Workplace**

The impact on the workplace is enormous. Rather than battling computers, workers will relate to them ... almost personally.

Take for example, a technology that we are already testing in our state-of-the-art HomeLab facility. It’s an advanced database-voice recognition tool called ‘Easy Access’, a voice-activated system for accessing music. You can call up a track you like by saying the title or even humming part of the tune. You have an option to rate how much you like a certain song and the central server builds up a profile which it can then compare to what other people have recommended, and suggest music you might like, but which it knows you don’t already have. Imagine the translation of this technology to the workplace for time-consuming tasks such as database queries and information searches.

Also think about the concept of ‘Context Awareness’—which provides information that is filtered through stored user profiles. By placing a Bluetooth transmitter throughout a factory production line, we can send specific information to a single user. This behavior will become more anticipatory and personal as time goes on, and as we get better at making the connections faster and the devices smarter. The ultimate goal, of course, is Ubiquitous Connectivity through wireless technology, which will include text, video, audio, and telephony. The possibilities are endless.

How will we achieve an Ambient Intelligent workplace?



## Industry Challenges & Transformations

We have the devices and we have the technology. The world today is filled with devices of more or less intelligence, and ever-expanding and interconnected networks. The stage has been already set for the rise of ambient intelligence.

Some considerations for us in the industry to tackle as we move toward this future:

- development of behavior patterns for the objects
- creating objects of cultural relevance
- materials research
- new partnerships
- open systems and seamless inter-operability
- the blurring of lines between products, applications and the content

So how do we get there? We need to make some changes in the way we see and do things.

First: Losing the Boxes - The widespread perception that the PC is the natural terminal point for connectivity is holding us back. The PC is only suited to a small portion of the interactivity we are entitled to. This isn't a discussion about whether the intelligence resides on the network or on the PC. It resides with the user. And the user wants to interact more naturally. To interact with systems that may well be hidden but are intelligent and capable of anticipating our needs.

Second: Thanks to wireless connectivity and advanced storage, the **Display** is the only part of the system we'll see in the home - Display big and small will be our interface with the digital world.

Philips' answer to the challenges we face as an industry is to address three technological trends. These will lead the way to Philips' vision of the Ambient Intelligent Future:

- First, there is Ubiquitous Computing. This means that microprocessors are integrated into all the objects around us. We will find computing power in our cars, in our bathroom mirrors, in our eyeglasses, in our books, in our shoes—everywhere.
- Next, we find Ubiquitous Communication. These microprocessor-enabled objects are able to communicate with each other over wireless networks. This is an extremely powerful technology, because it surrounds human beings with an always-on, always- connected electronic environment. We are literally connected to everything...and everybody...all the time.
- Finally, we come to Intelligent User Interfaces. Rather than people adapting their behavior to a machine, as in typing, or using a mouse, or even dialing a telephone, the machine adapts to the people using it, even anticipating their needs. Intelligent User Interfaces will change the way we live our lives, because we no longer have to limit our machines' performance or utility by the way people interact with them.



Consider technology that can learn new things and relate to people. For many people, this is the most 'science fiction' aspect of ambient intelligence. But for the people in this room, you know that computing power and new advances in machine intelligence have brought us closer and closer to making this reality.

We as an industry, and we in this region, need to gear up to address this new way of thinking and this new convergence of technology.

Asia Pacific and China, are now moving from being the labor to being the drivers of development and initiators of the technology. This region has already become the test-bed of many new technologies. And certainly, we expect great consumer demand here.

## **Conclusions**

As a company, Philips has embraced ambient intelligence as our vision of the future. And we have done so for a very good reason. In fact, for four very good reasons. Philips has four technological pillars which we can apply to ambient intelligence— Displays, Storage, Connectivity and Digital Video.

- Displays - a key Philips strength. Wherever you go in the world, people interact with information on Philips displays, from small ones on mobile phones to very big displays on the street.
- Storage - We were one of the key inventors of the CD, and we led the DVD revolution as well. You may have heard about the recent announcement in Tokyo about the next generation large capacity optical disc video recording format, called 'Blu-ray Disc.'
- Connectivity - I have already discussed how connectivity is vital to the Ambient Intelligent experience. Here, too, Philips is evolving the technology of connectivity with our Bluetooth research.
- The last pillar of Philips technology, upon which the Ambient Intelligent Future will be built, from acquisition to display, is Digital Video. We are transforming the way we access television and the internet, at home or while on the move.

Of course, ambient intelligence is more than technology; it's about people and how they relate to that technology. But I'd like to say a word here about the challenges and opportunities brought to people - Interactivity.

We will stop pushing buttons and turning dials and start to use the entire physical world as an interface.

'Do people want it?' We believe that they do.

'Can we do it?' Yes we can.



# PHILIPS

As technology becomes transparent, people's intelligence will be the central focus of the future and enabling them to leverage their skills, either in the home or at the office, will be the cornerstone of the future of Philips. Creating rewarding workplaces and enjoyable home environments - the soul of ambient intelligence, will be our guiding vision. Join us on this journey toward the Ambient Intelligent Future.

Thank you.