

# Smart Technology

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# The plan of the lecture:

1. Internet of Things. Big data.
2. Artificial Intelligence.
3. Technology Block Chain. Using Smart-services.
4. Green Technology ICT. Teleconference.  
Telemedicine.

## Glossary:

| English                 | Russian                 | Kazakh              |
|-------------------------|-------------------------|---------------------|
| Smart Technologies      | Смарт технологии        | Смарт технологиялар |
| Green Technology        | Зеленные технологии     | Жасыл технологиялар |
| Smart-card              | Смарт карта             | Смарт карта         |
| Artificial Intelligence | Искусственный интеллект | Жасанды интеллект   |


## Brief description of terms:

- **Green Technology** - Innovation, which are based on the principles of sustainable development and re-use of resources.
- **Smart-card** (smart card) - plastic cards with integrated chip (ICC, integrated circuit (s) card - Card with integrated electronic circuitry).
- Appointment of smart cards - one-and two-factor user authentication, storage of key information.
- **Artificial Intelligence** (AI English Artificial intelligence, AI.) - Science and technology to create intelligent machines, especially intelligent computer programs.

**Smart Technologies** introduced the first **Smart Board** interactive whiteboard in 1991. It was the first interactive whiteboard to provide touch control of computer applications and annotation over standard Microsoft Windows applications. In 2003, Smart developed and later patented DViT (Digital Vision Touch) technology. This camera-based touch technology for interactive whiteboards and interactive displays uses digital cameras and proprietary software and firmware to detect finger or pen contact with the screen. That contact is then interpreted as finger or pen activity.

As of fiscal year end 2010, Smart Technologies holds more than 150 issued patents with more than 600 patents pending. In 2011, Smart Technologies celebrated the 20th anniversary of the *Smart Board interactive whiteboard*, which coincided with the installation of the two millionth interactive whiteboard. As of October 2011, Smart employs more than 1,700 people. Smart products are sold through dealers across North America and through distributors in countries around the world.





Smart Technologies is a publicly traded company headquartered in Calgary, Alberta, Canada. In 1992, Smart formed a strategic alliance with Intel Corporation which resulted in joint product development and marketing efforts and Intel's ongoing equity ownership in Smart.

Smart home - **Home automation** is the residential extension of building automation and involves the control and automation of lighting, heating, ventilation, air conditioning, appliances, and security. Modern systems generally consist of switches and sensors connected to a central hub sometimes called a "gateway" from which the system is controlled with a user interface that is interacted either with a wall-mounted terminal, mobile phone software, tablet computer or a web interface.



# What is a "Smart Home"?



*"A home equipped with lighting, heating, and electronic devices that can be **controlled remotely by smartphone or computer.**"*

– Oxford dictionaries (2014)

*"A dwelling incorporating a **communications network** that connects the key electrical appliances and services, and allows them to be **remotely controlled, monitored or accessed.**"*

– UK Department of Trade and Industry (2003)



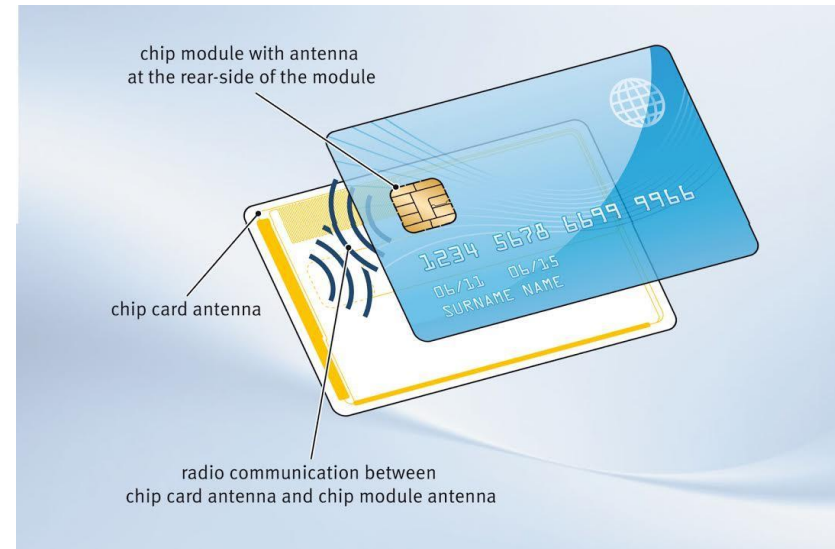
The first Smart TV related patent was filed in 1994, though it's only in the last 5 years. Smart TV refers to a trend of integrating Internet-connected technologies into a TV set; a convergence of computer-like features. Smart TVs may have one or more of the following features:

- Video Playback Via DLNA/USB.
- Apps & Games;
- Gesture & Voice Control;
- Social Networking;
- Web Browsing;
- Smartphone Connectivity;



# Smart chip

- A smart chip is an extremely small piece of hardware that includes a microprocessor for computing, or other resources for high-level data handling. The smart chip on a sophisticated modern card, such as a credit card or identification card, allows the card to function as a computing device or a drive-type data holder, which provides for various processes such as authentication and data storage.



# IOT

# AI/ML

- The Internet of Things (IoT) describes the network of physical objects—“things”—that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the internet.

- Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert systems, natural language processing, speech recognition and machine vision.

## **Questions for self-control:**

- Define Smart technology?
- What is Smart Home?
- What are the advantage and disadvantage smart board technology ?

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