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The 5th Generation Computers

**Introduction**

The fifth generation of computing is called "artificial intelligence (AI)," and it is the goal of computer scientists and developers to eventually create computers that outsmart, outwit, and maybe even outlast their human inventors.

Artificial intelligence can be broken into five distinct categories:

1. games playing
2. robotics
3. expert systems
4. neural networks
5. natural language.

**CHARACTERISTICS**

1) The fifth generation computers will use super large scale integrated chips.

2) They will have artificial intelligence.

3) They will be able to recognize image and graphs.

4) Fifth generation computer aims to be able to solve highly complex problem including decision making, logical reasoning.

5) They will be able to use more than one CPU for faster processing speed.

6) Fifth generation computers are intended to work with natural language.

The fifth generation computers have Huge memories which ranges in Terabytes and even more. Secondary storage devices are becoming denser, earlier a compact disk (CD) was able to store about 100-200 MBs, now DVDs(Digital Versatile Disks) and Blu-Ray Disks of same size Stores data about 4 GB to 17 GB and some can store even 50 GB to 100 GB. With the developing technology HVDs (Holographic Versatile Disk) can store data up to 6 Terabytes.  
1. They are complex, sophisticated tools for better programming and they also need high level of language translator.  
2. Many people are becoming reliant on the advanced technology for tasks that they can do without computers.  
3. They can give more power to companies to watch what you are doing and even allow them to infect your computer.  
4. They tend to be sophisticated and complex tools. 

**Advantages**

1.) These computers are much faster than 1st, 2nd, 3rd and 4th generation computers.

2.) It is easier to repair these computers.

3.) These computers are much smaller in size than other generation computers

4.) They are reliable and work faster.

5.) They have longer battery life and better graphics.

6.) They have more storage spaces to hold a lot of information

7.) These computers are able to accept spoken word instructions (voice recognition) and imitate human reasoning.

**Fifth Generation of Computer  
Present and beyond**

AI is an emerging branch in computer science, which interprets means and method of making computers think like human beings. All the high-level languages like C and C++, Java, .Net etc., are used in this generation.  
ASIMO, an acronym for Advanced Step in Innovative Mobility, is a humanoid robot designed and developed by Honda. Introduced on 21 October 2000.

1) Game Playing  
One of the biggest breakthroughs of artificial intelligence was in 1997, when an IBM computer successfully beat the world champion of chess at his own game. It was the first time a computer had beat a human being.

2) RoboticsIn the realm of artificial intelligence is about creating robots which can experience, and react to, external stimuli -- just like their human counterparts.  
That means these robots will be able to lead semi-autonomous lives, aware of their surroundings and able to independently modify their behaviour based on their environment. It's one of the most promising, and most difficult, areas of artificial intelligence.  
These so-called expert systems can help people make the right decision in a tough environment; not only are they able to store much more information than the human brain, as well as have it more readily available, but their systems are not clouded by biases and other purely human errors in judgment. Expert systems are quite black and white, quite robotic, and it is the hope of artificial intelligence developers that they will be better at decision making and diagnosing problems than their human counterparts.

3) Neural NetworksA neural network tries to reproduce the thoughts and physical connections of human or animal brains, and is one of the hottest areas of fifth generation computing. These neural networks are also becoming important in much smaller applications, such as the voice recognition feature on many current personal computers and mobile phones.  
This is often considered one of the "holy grails" of artificial intelligence. Currently, the kind of voice recognition that is available to consumer’s falls more under the category of "dictation" than "conversation." That's because the computer can hear the words and transcribe them into text, but it doesn't really have the ability to understand their meaning or their context.  
  
The use of parallel processing and superconductor is helping to make artificial intelligence a reality. Quantum computation and nanotechnology will radically changing the face of computers in years. The goal of fifth generation computing is to develop devices hat respond to natural language input and are capable of learning and self-organization. The key developments of fifth generation computers are summed up as :- ULSI (Ultra Large Scale Integrations), scalable parallel computers, workstation clusters, Intranet, Internet, WWW, Micro-kernels, Portable software and hardware platforms etc.  
4K Throw Projector from Sony -  
September 4, 2014  
The product was essentially a projector mounted in a credenza, firing its massive 4K laser image (up to 147 inches) on the wall directly above it, rather than across the room. Sony made no secret of the fact that this would be an ultraluxury device selling well north of $30,000.