

This is a description of all the robots seen in the “Robots of Today” video.

Intro

There are an overwhelmingly large number of robots in popular media. I tried to choose ones children would be familiar with.

What’s Hard for Robots?

0:18 - BIP

<http://www.inrialpes.fr/bipop/bip.html>

French National Institute for Research in Computer Science and Control

0:27 – Asimo by Honda

0:33 – RABBIT

<http://robot-rabbit.lag.ensieg.inpg.fr/English/>

Le Laboratoire d'automatique de Grenoble

(Despite not having feet, this was one of the most realistic humanoid walkers around at the time of the video’s creation in 2005)

0:42 – Dexter

http://www-robotics.cs.umass.edu/Research/Humanoid/humanoid_index.html

UMass, Amherst

(This robot is not really playing, like I say in the video, but rather learning how to move and grasp objects.)

Arms and hands by Barrett Technologies

0:47 – Unknown

I forget where I got this video. But it is probably some face recognition software, which is more advanced than face *detection* software.

What’s Easy for Robots?

0:55 – Fanuc

There are many other industrial robot companies. But most notable for autonomous robotics is Kuka. They have sponsored RoboCup, and are also a partner with Microsoft Robotics Studio.

Remote Control Robots

1:21 – Spirit / Opportunity by NASA

1:29 – Robonaut by NASA

1:37 – Wolverine & Mini-ANDROS II robots by Northrop Grumman

Foster-Miller and IRobot also make several military robots.

1:45 - ?

The RoboCup rescue competition is significantly more complicated than what is shown in this clip. The real rescue robots in use by USF are much smaller than this robot.

1:53 - ?

http://download.srv.cs.cmu.edu/~biorobotics//projects/prj_search_rescue.html
CMU

Robots in the home

2:05 – Roomba by IRobot

2:13 - Robomower by Friendly Robotics

Robot Body Types

2:22 - KHR1 by Kondo

The Bioloid from Tribotix is another interesting robot similar to this.

2:32 - Dartmouth Robotics Lab

This robot is learning how to escape from the sand trap.

<http://www.cs.dartmouth.edu/%7Erobotics/undergrad.html>

2:35 - uBot by UMass Amherst

http://www-robotics.cs.umass.edu/Research/Distributed_Control/uBot/uBot.html

2:43 – PackBot by IRobot

2:50 - Asterisk robot by Osaka University's Arai Lab

http://www-arailab.sys.es.osaka-u.ac.jp/e_index.html

3:00 – RHex

This is a non-standard gait for RHex.

This was a joint project between the University of Michigan, McGill University, UC Berkeley, CMU, and University of Pennsylvania. It is now being ruggedized for commercial sale by Mecheligent, Inc.

3:03 – QuadCrawler

Available as a kit from many hobbyist robotics stores. There are several varieties including 6 legged versions.

Robots from Nature

3:10 – S5 by Dr. Gavin Miller

<http://www.snakerobots.com>

3:17 – Aibo by Sony. (ERS-210A)

This robot is demonstrating the fastest gait known for the Aibo. Notice that it is walking on its elbows and not on its front feet.

http://www.cs.utexas.edu/users/AustinVilla/?p=research/learned_walk

UT Austin

3:25 – Whegs from Case Western

3:37 - Jumping Mini-Whegs from Case Western

These robots have half wheels - half legs, called “whegs”. They allow it to climb over obstacles very easily.

3:49 – BEAM robots invented by Mark Tilden

Now sold as kits at various robot hobby stores

Robots Not from Nature

4:09 – Molecube by Stanford University

<http://ccsl.mae.cornell.edu/index.html>

4:19 – PolyBot by Xerox PARC

<http://www2.parc.xerox.com/spl/projects/modrobots/>

Robot Games

4:45 - Ants robots by MIT

<http://www.ai.mit.edu/projects/ants/>

4:52 – Various maze solving robots. (Called a micromouse).

5:05 – RoboCup small size league

5:12 – RoboCup 4-legged league

Dance like a Robot

6:32 – Qrio by Sony

You can do it too

Legs – A very simple hexapod. (Couldn't turn)

Robotnik – 4WS with IRPD.

Robo-Snake – A 5 segmented snake with red LED eyes.

Learn to turn – Robot learns what to do when it hits a wall.