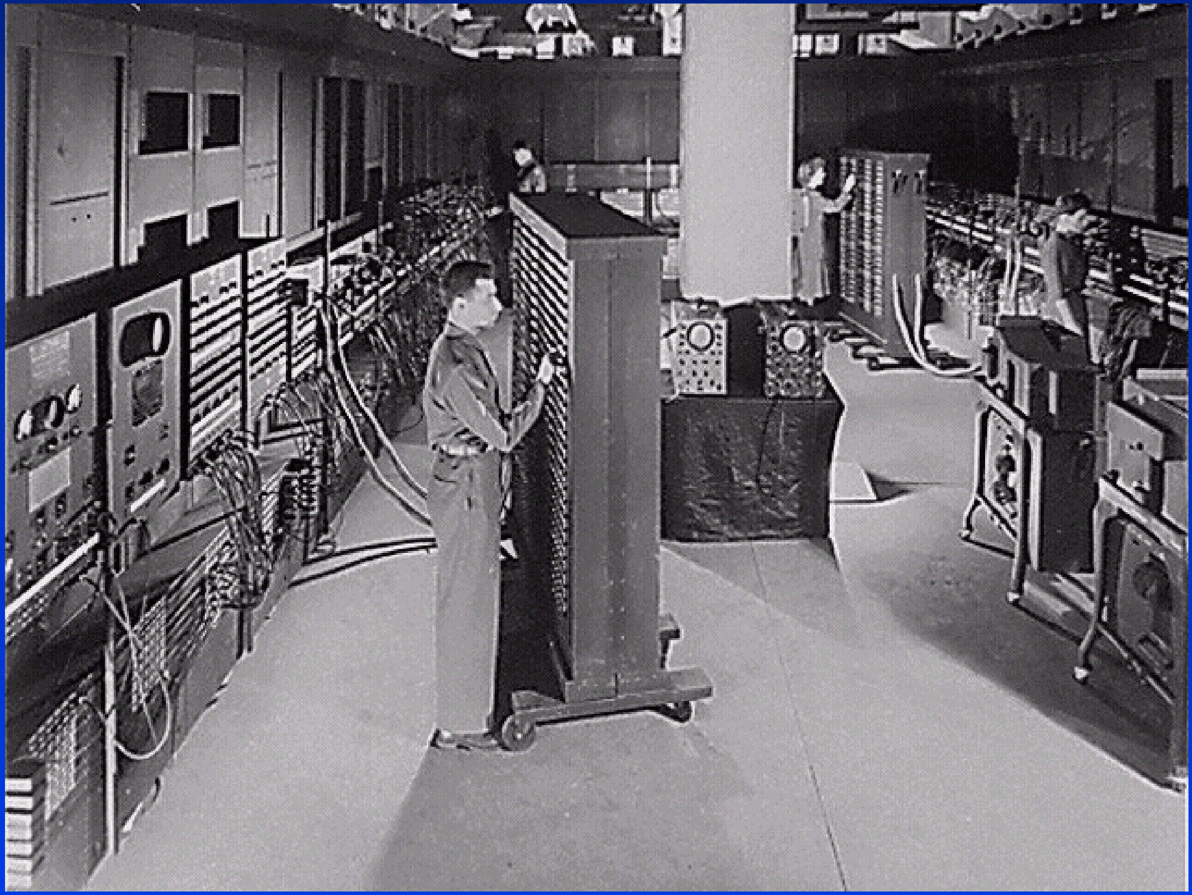
CS4811
Artificial Intelligence

Spiffy Introduction to AI

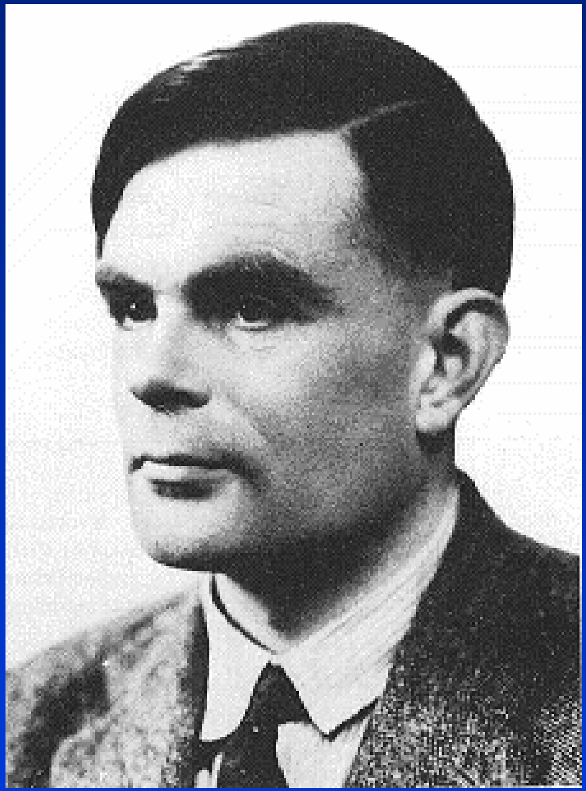
MTU

Some slides from: Subbarao Kambhampati,
Arizona State University

1946: ENIAC heralds the dawn of Computing



1950: Turing asks the question….



I propose to consider the question:

"Can machines think?"

--Alan Turing, 1950

1995: RALPH takes a trip from coast to coast

CMU's RALPH program drove a van for all but 52 miles of a trip from D.C. to San Diego

1996: EQP proves that Robbin's Algebras are all boolean

----- EQP 0.9, June 1996 -----

The job began on eyas09.mcs.anl.gov, Wed Oct 2 12:25:37 1996

UNIT CONFLICT from 17666 and 2 at 678232.20 seconds.

---------------- PROOF ----------------

2 (wt=7) [] -(n(x + y) = n(x)).

3 (wt=13) [] n(n(n(x) + y) + n(x + y)) = y.

5 (wt=18) [para(3,3)] n(n(n(x + y) + n(x) + y) + y) = n(x + y).

6 (wt=19) [para(3,3)] n(n(n(n(x) + y) + x + y) + y) = n(n(x) + y).

…….

17666 (wt=33) [para(24,16426),demod([17547])] n(n(n(x) + x) ….

[An Argonne lab program] has come up with a major mathematical proof that would have been called creative if a human had thought of it.

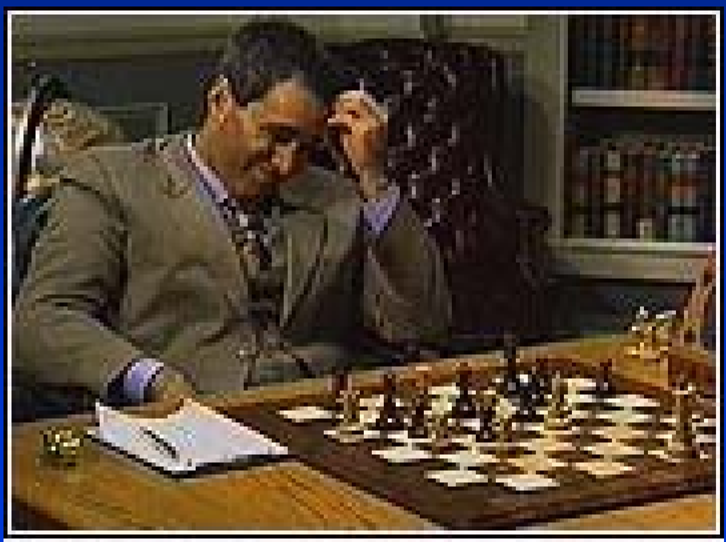
-New York Times, December, 1996

Jan 12, 1997: HAL 9000 becomes operational in fictional Urbana, Illinois

…by now, every intelligent person knew that H-A-L is derived from Heuristic ALgorithmic

-*Dr. Chandra, 2010: Odyssey Two*

May, 1997: Deep Blue beats the World Chess Champion



Deep Blue had Kasparov in deep thought (CNN)

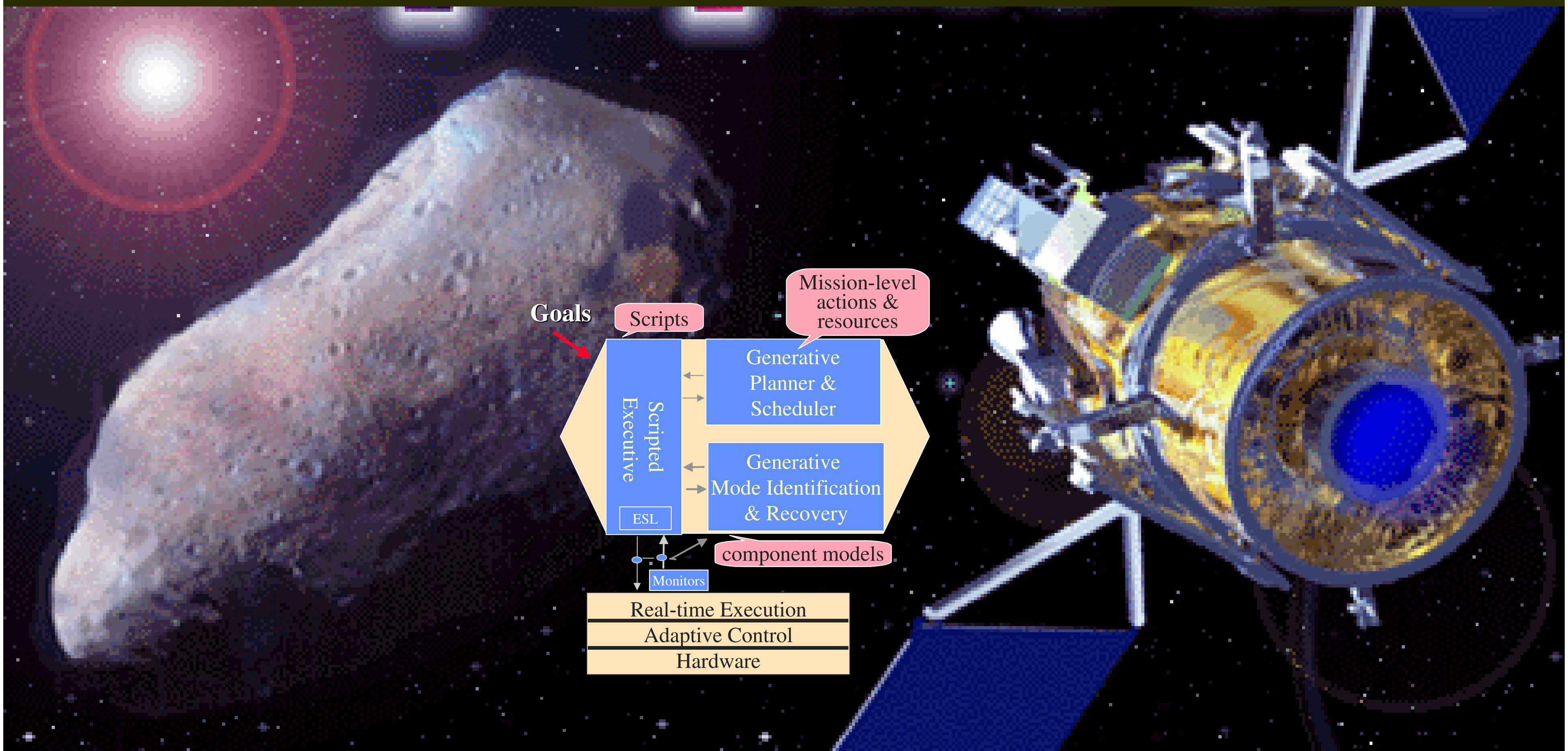
vs.

The cunning Deep Blue (CNN)

I could feel human-level intelligence across the room

-Gary Kasparov, World Chess Champion (human)

May, 1999: Remote Agent takes Deep Space 1 on a galactic ride



For two days in May, 1999, an AI Program called Remote Agent *autonomously ran* Deep Space 1 (some 60,000,000 miles from earth)

May 2000: SCIFINANCE synthesizes programs for financial modeling

- Develop pricing models for complex derivative structures
- Involves the solution of a set of PDEs (partial differential equations)
- Integration of object-oriented design, symbolic algebra, and plan-based scheduling

Sept. 2002: Cindy Smart marketed

- Vision: can read, tell the time
- Speech recognition: can recognize 700 words and 77 phrases
- Voice synthesis: speaks with a soft voice

2005: AI in Manufacturing

- General Motors Variation-Reduction Adviser
- Ontology-guided search and case-based reasoning techniques for quality management

- GE Plastics’ Plastics Color Formulation Tool
- Case-based reasoning to retrieve, reuse, revise, and retain color formulas

Spring 2006: You take CS4811 Artificial Intelligence

….and its high-time you did it too. Some over-zealous soul has to stop HAL before it is too late...

Welcome!

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