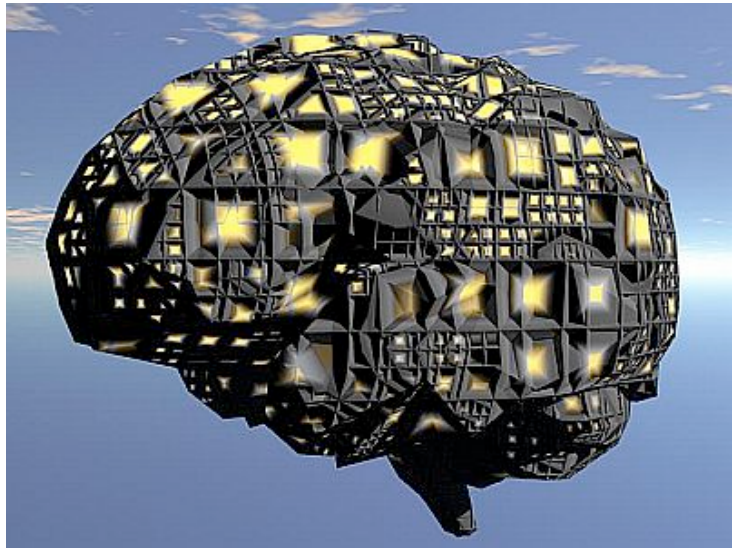


The Daily Galaxy: News from Planet Earth & Beyond

March 30, 2009

[International Artificial-Intelligence Team Builds Human Brain on a Silicon Chip](#)

Artificial intelligence investigators have built a fully silicon scale simulation of the human brain. The artificial neurons operate faster than the organic model, are built to learn and adapt, and even have a cool movie-style acronym, FACETS. One thing seems clear: AI researchers watch Terminator daily.



The Fast Analog Computing with Emergent Transient States project takes a different approach to other electronic intellect endeavors.

Research like the Blue Brain

project run vast software simulations of virtual brains, which allows them to tinker with the conditions and wiring of the brain with the tap of a keyboard. On the downside, you're running a layer of simulation of a parallel system on top of an utterly sequential computer system, which slows things down.

The FACETS hardware instead builds direct silicon similes of synapses and neural circuits, creating a real hardware brain which can operate in parallel just like the human mind.

Sure, it's more of an American Idol mind at the moment, with only two hundred thousand neurons compared to hundred billion in your head (a factor of five hundred thousand).

But the FACETS architecture is scaleable, and the team already have plans for a billion-synapse superchip - for those of you updating your "end of the human race" calendars, that's a fifty-thousand-fold increase in one generation. And we all know that computers don't have new generations more than once or twice a year.

FACETS Artificial Brain <http://www.technologyreview.com/computing/22339/?a=f>

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