Subject: The future of computers (quantum computing)
Posted by Blazer on Fri, 18 Jun 2004 09:04:24 GMT
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http://news.bbc.co.uk/2/hi/science/nature/3811785.stm

For those who are too arsed to click a link and read, well its pretty hard to sum up, so basically just understand that there is a "spooky" (what Einstein called it) property of atoms, known as "entanglement". Two atoms, once entangled mirror the properties of each other even though seperated by great distance. Nobody really knows how this works, it just does, but there have been several successful experiments allready where photons and atoms have been "teleported" (a laser beam destroyed at one location and teleported to another, toggling the properties of a remote particle, etc).

So what does this mean for computers? Think about how a computer works...zeros and ones...the electrical signals flowing through logic gates to signify states. Now imagine that instead of using flowing current going through circuits and logic gates, that we have the ability to simply toggle things on and off, at the speed of light...this basically means a computer that can process multitudes faster than our current supercomputers, while using less power, generating less heat. Note that the description I just gave is a very basic one and you should read the article to understand how it really works.

Teleportation has so many other applications as well...imagine the "throughput" you would get on a "download" if all the atoms signatures of a media device were teleported to your device...instant copy of data.
EDIT: Actually the act of teleporting requires destroying the origional, so it wouldn't be a copy of the data but a relocation of it. But whose to say you couldn't make local copies, and then telport/relocate the local copies to distant places instantly...quite handy