

Re: Hello There?

Source: <http://sci.tech-archive.net/Archive/sci.logic/2005-06/msg00077.html>

- *From:* Nam Nguyen <namducnguyen@xxxxxxx>
 - *Date:* Sat, 04 Jun 2005 15:41:10 GMT
-

Robert Low wrote:

Nam Nguyen wrote:

A sequence of 2 decimal digits could represent any value, between 0 and 100: plenty of room for representing any alphabet from a-z, A-Z, 0-9, a blank, and some more. So in the infinite decimal expansion of a transcendental such pi or e, I wonder if there would exist a meaningful sentence or phrase such as "Hello There"?

Assuming that pi is normal, any (finite) message you are interested in is encoded there, in the encoding of your choice.

I actually don't know (or remember) the definition of a transcendental's being "normal". Of course we certainly could create a transcendental containing "Hello There" simply by putting it there, say, in front of pi's decimal expansion. The motivation for asking the question is that "Hello There" is too short; so pi may "accidentally" contain it. But, in the name of abstract mathematics, let's assume we have a DVD huge enough to contain a very high resolution audio-video movie-frames of the Earth for the past 65 million years. [In brief, the DVD also contains many intelligent-conversations]. Now, the longer this `_finite_` DVD is, the more difficult we could imagine that pi (in the binary format now) could contain it. But pi is still an infinite number, so it's equally hard to see why pi couldn't accommodate such a finite DVD. Also, pi is algorithmic; so *if* such DVD exist in pi, could we say then *in principle*, we can formalize biological life processes and human intelligence, through the algorithm that generates pi? Just a curiosity though.

Re: Hello There?