Digital Computing And The Real Numbers

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This has direct implications for computing:

The real numbers.
Drill down and select a range.
Infinitely extensible. Inner extensibility.

It also has implications for how we perceive the world, and our perceptions; and work with space, the external world, and mind – and action (stillness included).

Many of us work with this already:

Whether it's me with one of my papers, any author, a children's book with text and illustration, a webinar, an advertisement, an event, making breakfast, waving hi, talking, reading and studying philosophy, going for a visit, contemplating a religious text, starting a project at work: we start with a thought, an integer from the relational, perhaps referencing a surface or a geometry, the real numbers, then whether it's to write it or create it or set it up or enact it, or participate, we take an interval of time, the real numbers, and create, have, or end up with entire worlds. We then sometimes have worlds within worlds; and these intersect worlds and worlds within worlds – literature distills this. Memory can spin this off in new ways, and also new thought or perception.

There is a way to perceive this in the external world:

We also work with this in the external world, in the real world: space is the real numbers. It is significant that the person in the village, the person in ancient times, and the person in modern times had or has access to this.

See my papers "Computing, Zen, Space, The Real Numbers, And Memory", "The Infinite Point", and "Infinity Coupled With Infinity, In A Finite Time And Space" at the link provided at the end of this paper.

In computing…

I'm thinking of the computing hardware…is it possible to have this sort of real numbers representation, drill down and select a range, and infinitely extensible/inner extensibility, combined with the software, to yield just this very infinite-space (even within a 1 foot cube) that is this actual world? To have a computer that creates worlds limited only by time – or yielding time itself, as those worlds unfold – or as a function of time. And time, too, is a real number, as is space. That is, more abstractly, the 'computing surface' – perhaps neither hardware nor software, or both, or both hardware and software re-factored, in entirely new directions, while retaining a strong sense of what we mean with current digital computers.

Real memory as the real numbers.

Background, to my own thoughts and working-with, over the past some time:

Inner extensibility. – Kevin Sensenig, on delightful, expressive Objective-C development using the OpenStep APIs.
"Smaller than an electron, it contains countless galaxies." – Tao Te Ching, translated by Stephen Mitchell. 'It' refers to the Tao.
"Material characteristics are, in fact, not material characteristics", and "Whoso perceives that characteristics are, in fact, no-characteristics, perceives the Tathagata." – The Diamond Sutra, translated by A. F. Price.
The unfolding relative. – "The unfolding relative is this: things are relative to each other, and this unfolds in a continual and infinitesimal way, and includes both the integers and the real numbers." – Kevin Sensenig
The infinite point. – Kevin Sensenig

Comment 1

The world may have this real number, infinite-extensibility: but, with respect to computing, even if you could say access real number based memory, only so many trees can fit in a forest: the computer still has to have room for the computation. Or, can that be inner-extensible, the expression of it only an expression of time itself? (See Dogen's essay Uji (Being-Time) in his work Shobogenzo. I have the book "Shobogenzo Uji" by Dogen translated by Eido Shimano Roshi.) I think so! Invent another galaxy-within, scale, and plant a new forest.

Comment 1.1

Until the math processor or the math layer has available the real numbers, neither the infinite point nor the infinite-space will be available. Even the space within a 1 foot cube will not be able to be represented as it is.

Comment 2

Perhaps it should be "galaxy"-within. In this real world: 1) It is neither being nor non-being that allows the ball to bounce off the pole in tether ball – it is not a simulation. 2) It is perhaps this, and the math-in-action, that is this very world. But that's an axiom system. And, is an electron (and its spin, and its field) verb-math? Then there's more: 3) Each thing represents, projects, feels, or notices. These 3 make Mind-only, and likely there is more. For instance, 4) Is the relational mind?

Could one *invent* this?

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