Re: Well Ordering the Reals

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- *From*: Tony Orlow <aeo6@xxxxxxxxxxx>
- *Date*: Tue, 14 Feb 2006 10:17:20 −0500

Virgil said:

> In article <MPG.1e5a76a391d3f51c98aa33@xxxxxxxxxxxxxxxxxxxxxxxxxx>,
> Tony Orlow <aeo6@xxxxxxxxxxx> wrote:
>
> > David R Tribble said:
> >
> > > Virgil wrote:
> > >
> > > > > TO−numbers cannot support
> > > > > a standard arithmetic as
> > > > > described.
> > >
> > > Tony Orlow wrote:
> > >
> > > > The arithmetic isn't exactly standard. It's
> > > > somewhat restricted. But,
> > > > there is
> > > > arithmetic possible with these numbers, and
> > > > they are an improvement, I
> > > > think,
> > > > over the adics.
> > >
> > > That could be your first useful proof. Take an arithmetic
> > > problem that
> > > is difficult or impossible using p−adics and show how easier
> > > it is
> > > using T−riffic numbers.
> >
> > Well, we could talk about how the 10−adics ...111, ...112, and ...113 are all
> > apparently evenly divisible by 7, which makes no sense, whereas 1:000...000

> > when divided by 7 has 6 possible remainders, none of them 0, which makes perfect sense. Or, we could talk about how the infinite sum of the divergent infinite series 1+2+3+4... can be expressed precisely as
> > 0:100...000:100...000,
> > with limit points as 2log2(N) and log2(N). We could talk about how the T−riffics handle negative values as well as positive, and how addition works between them as it does for normal n−complement numbers. What other problems
> > are there with the adics? The T−riffics probably solve all of them. :D

> But TO−numbers cannot solve the problem of how they can exist when all standard set theories say they cannot.

The T−riffics are not subject to your puny standard theories and their bogus theorems. They are a simple extension of the digital number system allowing for values of infinite ratio within the set. They scoff at your aleph_0, your cutest little infinity, and countability as a criterion for anything. The T−riffics are immune to your proofs. Haha (I am in a silly mood today).

It is not my job to account for your misconceptions regarding infinite sequences.

> TO−numbers require a sequentially ordered uncountable set to index it digits, but all standard set theories, with their standard inductive axioms, allow simple proofs that sequentially ordered sets are, at most, countably infinite.

And yet, it's funny how declaring bits at infinite positions in the string hasn't led to any obvious contradictions. Given the repeating strings defining the infinite distances between limit points, an uncountably infinite string is defined. Therefore, the T−riffics are an empirical counterexample to your "proof" that no such sequence can "exist".

Now, as far as being able to specify any possible exact sequence, this can only be done over a countable domain. So, given only the zero point, we have only finite numbers that can all be specified. When you add limit points at infinite positions, you add new countable neighborhoods in what is really, ultimately, an uncountably long string of bits, and this doesn't break anything concerning the finite numbers. They are the subset of the T−riffics that only contain a limit point at 0, normally, or in general, only contain limit points at finite positions, and the question of infinite repeating strings between limit points is moot.

> SO that absent a TO axiom set for his TO numbers which somehow allows

uncountably infinite sequentially ordered sets, TO is SOL.

Don't be such a potty mouth. You're setting a bad example for the kids. ;)

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Smiles,

Tony
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