Re: Review of Mueckenheims book.

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- *From*: mueckenh@xxxxxxxxxxxxxxxxx
- *Date*: 1 Mar 2007 09:58:47 −0800

On 1 Mrz., 03:38, "Dik T. Winter" <Dik.Win...@xxxxxx> wrote:

In article <1172674257.469668.135...@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx>
mueck...@xxxxxxxxxxxxxxxxx writes:

> On 26 Feb., 04:14, "Dik T. Winter" <Dik.Win...@xxxxxx> wrote:
> > > Definition: The cross−section C(n) of a finite tree T(n) is the number
> > > 2^n of nodes of its last leve L(n).
> >
> > Obfuscations abound. So C(n) is the number of nodes that are at
> > distance n from the root.
>
> Correct, namely the maximum of paths which can be separated in this
> tree T(n).

Yes, as each path terminates at such a node. You again add obfuscation.

> > > The cross section C(oo) of the union of finite trees U(T(n)) is C(oo)
> > > = |2^omega| = aleph_0.
> >
> > Proof, please. And how do you *define* C(oo)?
>
> I do not define C(oo). We are talking about the union of finite trees
> It does not contain a Level n = oo or tree T(oo).

How can you state things about things you do not define? You state C(oo)
as being something, but you do not define C(oo)?

I do not define C(oo) *starting from the complete tree* T(oo) but
using the union U(T(n)) of the finite trees, (because it is in
question whether T(oo) = U(T(n))).

> Then you see that the cross section of the
> union tree U(T(n)) = T(oo) is C(oo) = aleph_0.

What can I see if you even do not give a definition of your terminology?

> > > Proof: Left as an exercise to the reader. [Hint: Consider the proof of
> > > the countability of the set of all unit fractions required to prove
> > > the divergence of the harmonic series:
> > > 1/2 + (1/3 + 1/4) + (1/5 + 1/6 + 1/7 + 1/8) ...
> > > or consider the cardinal number of nodes of the union of finite
> > > trees.]
> >
> > Is this a proof? For the divergence of the harmonic series, countability
> > plays no role. It is just a lack of proof.
>
> You misunderstood. There is the saying that aleph_0 parentheses result
> in aleph_0 terms in parentheses although for every finite segment of n
> pairs of parentheses we have 2^n terms in the last pair of
> parentheses.

I can say nothing about such a saying.

The harmonic series as split off in Oresmes proof is isomorphic with
the binary tree:

1
1/2
1/3, 1/4
1/5, 1/6, 1/7, 1/8
1/9, ...,1/16
....

Regards, WM

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