Re: Collatz at the Hilbert Hotel

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"mensanator@aol.compost" wrote:

> *0100101111101000000000000000000000000000000000000000*
> *0111000111100000000000000000000000000000000000000000*
> *1010101011100000000000000000000000000000000000000000*
> *0000000011000000000000000000000000000000000000000001<−−edge wrapping*
> *1000000010100000000000000000000000000000000000000001 shows how the*
> *0100000100000000000000000000000000000000000000000010 pattern is*
> *0110001000000000000000000000000000000000000000000011 independent of*
> *any mathematical anchor. this is simply a circular array.*

I'd not thought about the wrapping of lines but surely once you've wrapped you're no longer operating on the lowest significant bit.

The next statement's great:−

> *As long as the array is larger than the Excursion, the CA will generate the same*
> *bit patterns as the standard Collatz algorithm*

"As long as the array is larger than the Excursion"
This is a major part of the proof for the Collatz conjecture, if it's possible to derive a maximum excursion from any initial point then you're showing that you can never head off to infinity.

For any sequence in the standard collatz if you can show a minimum (that isn't 1) then you have to have a closed loop or a sequence heading for infinity.

If you've got a maximum size for the excursion then it can't be the latter so you've only got the loop to worry about − not that it's "only" of course :−).

Regards,
Mike...

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