

# Re: Implementable Set Theory and Consistency of ZFC

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*Source:* <http://sci.tech-archive.net/Archive/sci.math/2007-10/msg03384.html>

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- *From:* Han de Bruijn <[Han.deBruijn@xxxxxxxxxxxxxxxx](mailto:Han.deBruijn@xxxxxxxxxxxxxxxx)>
  - *Date:* Thu, 18 Oct 2007 13:29:35 +0200
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hagman wrote:

This is still not correct as the Axiom of Infinity is an axiom of ZFC and does not hold in your model (which is thus a model of ZFC-Infinity, in fact one of ZFC-Infinity+~Infinity).

With help of a bijection, which was basically discovered by Alexander Abian, a "simple model", or rather an Implementation of Set Theory in memory of common digital computers, has been conceived, in theory as well as in practice. With the implementation it can be proved that eight out of the nine axioms of ZFC are consistent, and that only the first four axioms are necessary for a constructive build of all sets. The ninth axiom of ZFC, Infinity, is not implementable.

Better?

You're still wasting a lot of paper to state that no infinite set exists under the assumption that all sets are finite.

I've simply deleted now the last section, in:

[http://hdebruijn.soo.dto.tudelft.nl/jaar2007/set\\_theory.pdf](http://hdebruijn.soo.dto.tudelft.nl/jaar2007/set_theory.pdf)

Don't you see that people had a *\*reason\** to include Infinity as otherwise set theory had an useless simple model?

Personally, I don't find such more humble kind of set theory "useless".

Han de Bruijn

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