Proof Assistant Isabelle

Boy Boshoven

Radboud University Nijmegen

June 16, 2010

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Boy Boshoven

- Larry Paulson, University of Cambridge (UK)
- Tobias Nipkow, Technische Universität München (Germany)

- Isabelle/HOL (Higher order logic)
- Isabelle/HOL-Nominal
- Isabelle/HOLCF
- Isabelle/ZF (Zermelo-Fraenkel set theory)
- Isabelle/Pure

- A successor of HOL.
- First version released in 1993.
- New version every year.

L4.verified by NICTA, microkernel written in c verified using Isabelle.

Other proven projects included in the Isabelle distributions.

- Verification of cryptographic protocols by Larry Paulson.
- Church-Rosser theorem by Ole Steen Rasmussen.
- Protocol verification using I/O Automata by Tobias Nipkow.

More? Webpage of Isabelle

Isar is the language used for theorems.

Explanation in demo.