

Titel: The Newspeak Programming Language

Referent: Dr. Gilad Bracha (Cadence Design Systems)

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Inhalt: Newspeak is a new dynamic language, descended from Smalltalk and Self. Like Self, Newspeak is a message-based language: all computation - even an object's own access to its internal structure - is performed by sending messages to objects. However, like Smalltalk, Newspeak is class-based. Classes can be nested arbitrarily, as in Beta. Since all names denote message sends, all classes are virtual; in particular, superclasses are virtual, so all classes act as mixins. There is no static state in Newspeak. Instead, top-level classes act as module definitions, which are independent, immutable, self-contained parametric namespaces. They can be instantiated into modules that may be stateful and mutually recursive. Naturally, like its predecessors, Newspeak is reflective: a mirror library allows structured access to the program meta-level. In this talk, we'll expand on these topics, illustrating interesting uses such as class hierarchy inheritance and domain specific language support.

Bio: Gilad Bracha is a Distinguished Engineer at Cadence Design Systems. Previously, he was a Computational Theologist and Distinguished Engineer at Sun Microsystems. He is co-author of the Java Language Specification, and a researcher in the area of object-oriented programming languages. Prior to joining Sun, he worked on Strongtalk, the Animorphic Smalltalk System. He received his B.Sc in Mathematics and Computer Science from Ben Gurion University in Israel and a Ph.D. in Computer Science from the University of Utah.

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