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Chapter 1

Mulspren

The previous chapter examined many end-user programming environments and found that most contain cognitive programming gulfs. These gulfs were often created when programing environments used multiple notations, and could manifest themselves in a variety of usability problems, ranging from users being unable to understand a program representation, to not wanting to execute their programs. Conversely, the previous chapter also found circumstances where multiple notations helped users understand programs. It concluded that there was a place for multiple notation programming environments, but developers had to be very careful to avoid creating programming gulfs. It concluded that there was a place for multiple notation programming environments, but developers had to be very careful to avoid creating programming gulfs.

This chapter introduces our programming environment, Mulspren. Mulspren was designed to avoid these gulfs and gain the potential benefits of multiple notations. Users program using two notations, one similar to English and one similar to conventional code. Changes in one notation are immediately reflected in the other notation, and users can move rapidly and seamlessly between the notations. This is programming using dual notations. When the program is executed, both notations are animated. Mulspren's

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language signature is [RE/WR/WA + RE/WR/WA + WA].

Papers describing Mulspren have been published in [1] and [2].

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1.3 section 3

1.4 section 4

1.5 section 5 bla bla bla bla bla bla bla bla bla bla bla bla bla bla bla bla

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[2] Tim Wright and Andy Cockburn. Evaluation of two textual programming notations for children. In *AUIC '05: Proceedings of the Sixth Australasian conference on User interface*, pages 55–62, Darlinghurst, Australia, Australia, 2005. Australian Computer Society, Inc.