AN ABSTRACT OF THE THESIS OF

Jay W. Summet for the degree of Master of Science in Computer Science presented on July 23, 2001. Title: End-User Assertions: Propagating their Implications.

Abstract approved: _____
Margaret M. Burnett

Spreadsheet languages are the most commonly used end-user programming paradigm, yet spreadsheets commonly contain errors. Research shows that a significant number of spreadsheets (20%-40%) created by end users contain errors. In an attempt to reduce this error rate, this work presents an assertion propagation system for an end-user spreadsheet programming language, along with proofs of correctness, and complexity analysis. In addition to the traditional benefits of assertions (dynamic error checking and the documentation of programmer assumptions) this system deductively propagates the implications of assertions. This propagation adds two benefits, the cross-checking of program logic, and additional immediate visual feedback about the range of behavior of the program code for the end-user.

End-User Assertions: Propagating their Implications

by
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Dean of the Graduate School

I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

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Jay W. Summet, Author

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