Relating Static and Dynamic Machine Code Measurments

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ABSTRACT

In an effort to relate static measurements of machine code instructions and addressing modes to their dynamic counterparts, both types of measurements were made on nine different machines using a large and varied suite of programs. Using classical regression analysis techniques, the relationship between static architecture measurements and dynamic architecture measurements was explored. The statistical analysis showed that many static and dynamic measurements are strongly correlated and that it is possible to use the more easily obtained static measurements to predict dynamic usage of instructions and addressing modes. With few exceptions, the predictions are accurate for most architectural features.

Note