The Realities of Language Conversions

A.A. Terekhov* and C. Verhoef**

*St. Petersburg State University, Faculty of Mathematics and Mechanics, and LANIT-TERCOM
198904, Bibliotechnaya pl. 2, Peterhof, St. Petersburg, Russia
**University of Amsterdam, Programming Research Group, Kruislaan 403, 1098 SJ Amsterdam, The Netherlands
ddt@tepkom.ru, x@wins.uva.nl

Abstract:

Billions of lines that have been written in COBOL, PL/I and other old programming languages are still in active use. Many commercial efforts to convert these languages to more modern languages have been started. However, few successful results have been achieved so far, which makes one wonder about the reasons why. This paper aims to shed light on the realities of language conversions and discusses some of the possibilities and limitations of automated language converters. We argue that the difficulties of source-to-source conversion are manifold and grossly underestimated. We illustrate that it is very challenging to resolve the intricate problems connected to language conversions.

Categories and Subject Description: D.2.6 [Software Engineering]: Programming Environments-Interactive; D.2.7 [Software Engineering]: Distribution and Maintenance-Restructuring; D.3.4. [Processors]: Parsing.

Additional Key Words and Phrases: Reengineering, System renovation, Software renovation factories, Language conversion, COBOL, Visual Basic, Java, Pascal.