

Industry Visit Report: Ericsson AB, Stockholm

Johan Lindhult
Department of Computer Science and Electronics
Mälardalen University
johan.lindhult@mdh.se

Introduction

During 2006, I have spent approximately 1-2 days/week at Ericsson AB in Älvsjö, Stockholm. The site in Älvsjö is, among other things, responsible for the development and the maintenance of the software in the AXE exchange system. Ericsson as a company shouldn't need any further introduction.

The project that I am involved in, deals with adapting software written for sequential architectures to parallel hardware. This is carried out together with people from Ericsson, and I also have two of my (assistant) supervisors at the company.

The purpose of my visits

My visits to Ericsson started 2004 with the purpose to document (by a formal semantics) the language PLEX, which is used to program the functionality in the AXE system. This work was carried out together with my supervisors at Ericsson, and described in a previous Industry Visit Report ¹.

The visits has continued during 2006, with inspection of the current software in order to get an opinion on how well the existing code is suitable for parallel processing, i.e., by trying to identify those parts of the software that are suitable candidates for concurrent processing. To determine this, we have looked at how the shared variables in the system are used, and if there are any potential problems/conflicts. A previous master thesis project [1] discussed this in general terms, but did not perform the necessary inspections.

The result of our studies was planned to be published during this fall, but the inspection has been far more time-consuming than we first expected, and the planned Technical Report (and a corresponding conference/workshop paper) has been postponed until this spring.

References

- [1] B. Lindell. Analysis of reentrancy and problems of data interference in the parallel execution of a multi processor AXE-APZ system. Master's thesis, Mälardalen University, 2003.

¹http://www.artes.uu.se/mobility/industri/ind_ericsson-2005_JL.pdf