A parallelizing compiler for Pascal. Maulik A Dave, Y N Srikant. Abstract. A parallelizing compiler takes as its input a program to a sequential language such as FORTRAN or PASCAL and after extracting parallelism which is implicit in it, generates code which is suitable for execution on a parallel processor. We have used Pascal for our compiler as it has extra features such as recursion, pointers, record structures and nesting of procedures. The aim is to extract the maximum parallelism in a reasonable time. Instead of flowgraphs, the concept of box graphs has been developed and implemented. An algorithm has been implemented to carry out simple and interprocedural dataflow analysis, array subscript analysis, to detect parallelism in box graphs and to convert them into box graphs depicting parallelism explicitly. The compiler generates code for the ORG Supermax machine, a shared memory multiprocessor with two 68020 processors running on UNIX operating system V.3.

KEYWORDS
Compiler; parallel processing; parallelization.

REFBACKS
There are currently no refbacks.