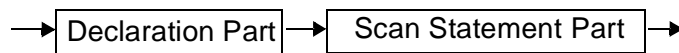


B. The MoPL-3 Grammar

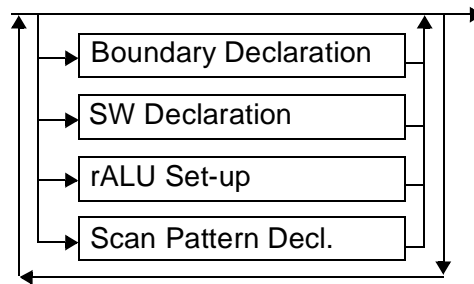
The Map-oriented Programming Language 3 (MoPL-3) is a procedural language to describe applications for reconfigurable accelerators based on the presented data sequencing method. In this appendix a revised version of the MoPL-3 grammar (see [Bec97] or [Hen97]) is given. For information on the semantics of MoPL refer to [Rei99], [ABH93] and [ABH94].

B.1 Program Definition

MoPL Subroutine

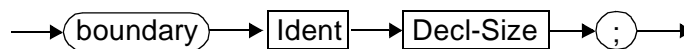


Declaration Part

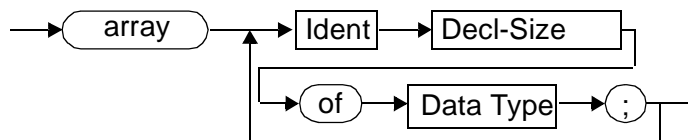


B.2 Boundary Declarations

Boundary Declaration

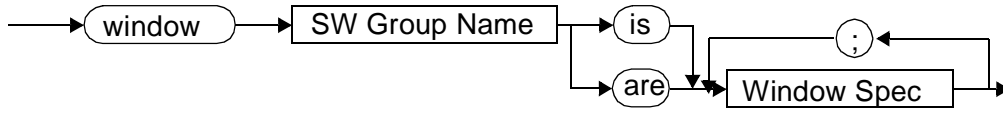


Array Declaration

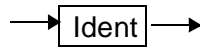


B.3 Scan Window Declarations

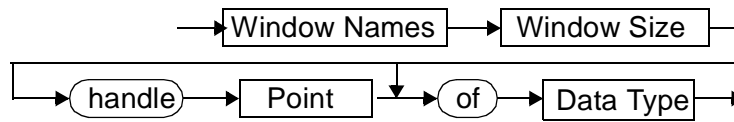
Compound Window Declaration



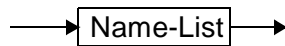
SW Group Name



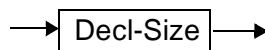
Window Spec



Window Names

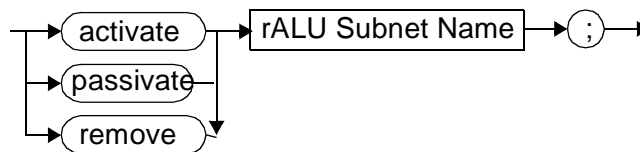


Window Size

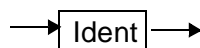


B.4 rALU Set-up Declarations

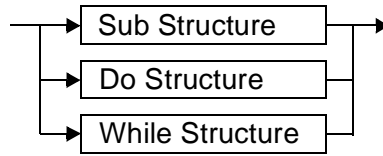
rALU Activation



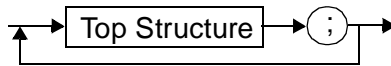
rALU Subnet Name



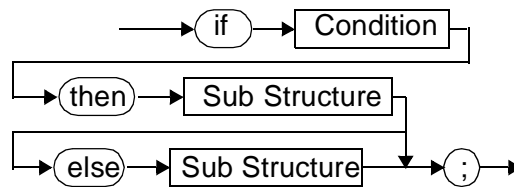
Top Structure



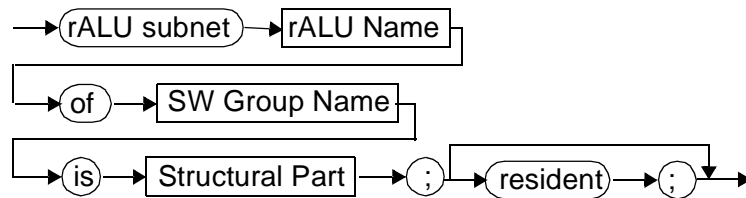
Structural Part



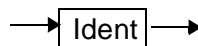
If Structure



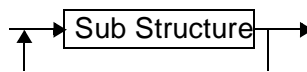
rALU Config



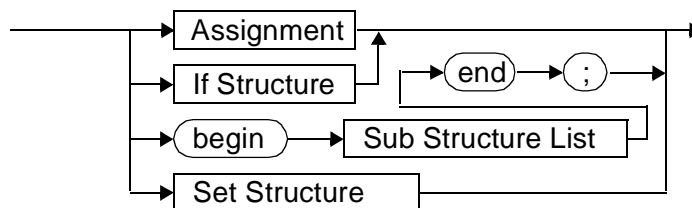
rALU Name

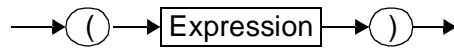
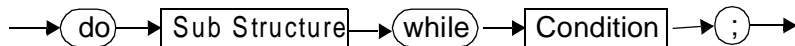
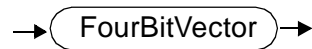
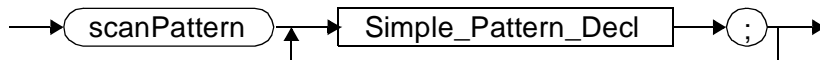
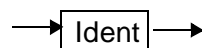
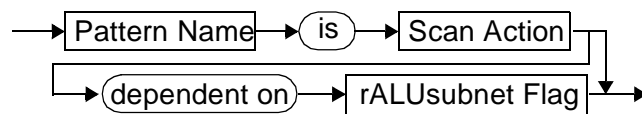


Sub Structure List



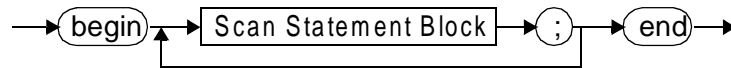
Sub Structure



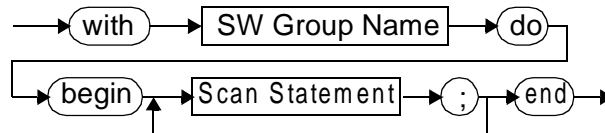
Condition**Set Structure****Do Structure****While Structure****Local Branch Flag****B.5 Scan Pattern Declarations****Compound Scan Pattern Decl****Pattern Name****Simple Pattern Decl****rALUsubnet Flag**

B.6 Scan Statement Declarations

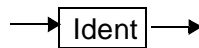
Scan Statement Part



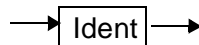
Scan Statement Block



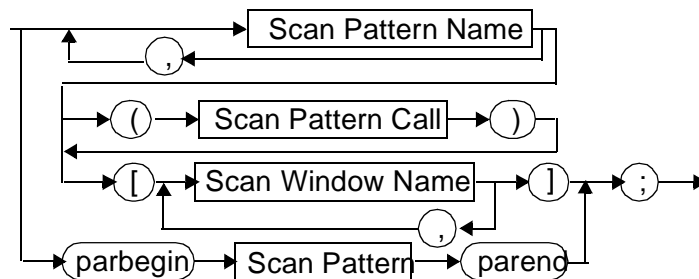
Scan_Pattern_Name



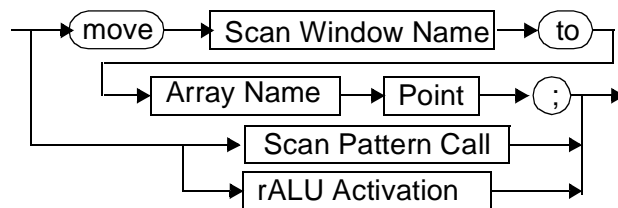
Scan Window Name



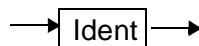
Scan Pattern Call



Scan Statement

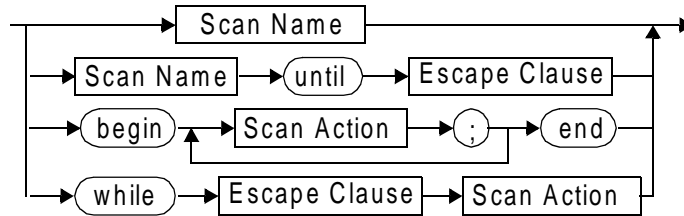


Array Name

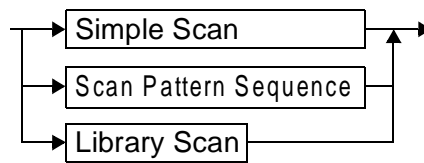


B.7 Scan Action Declarations

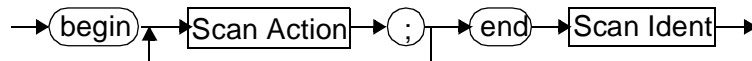
Scan Action



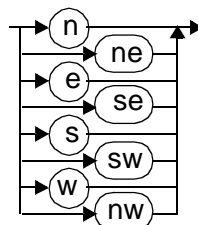
Pattern Spec



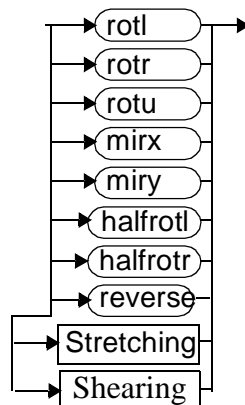
Scan Pattern Sequence



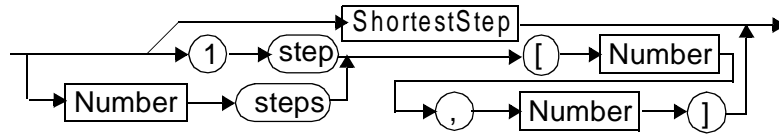
Shortest Step



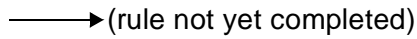
Transformation



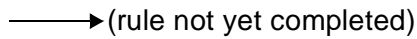
Simple Scan



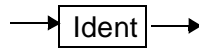
Stretching



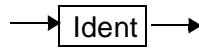
Shearing



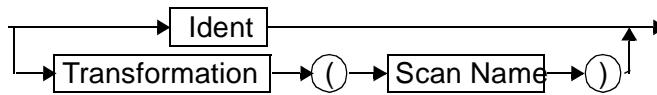
LibScanName



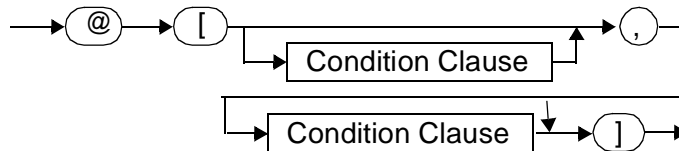
Scan Ident



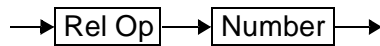
Scan Name



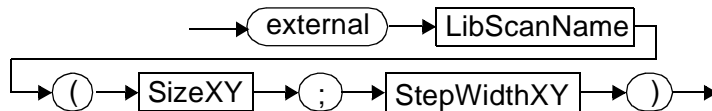
Escape Clause

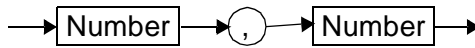
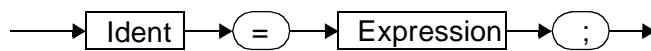
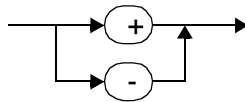
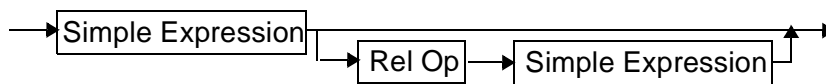
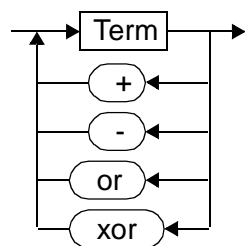
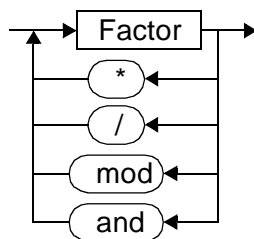


Condition Clause

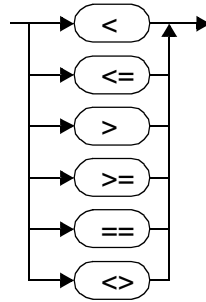


Library Scan

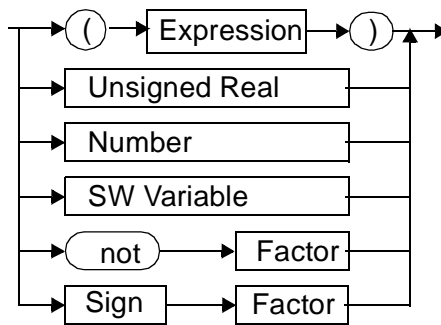


StepWidthXY**SizeXY****B.8 Expression Declarations****Assignment****Sign****Expression****Simple Expression****Term**

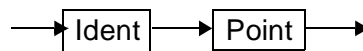
Rel Op



Factor

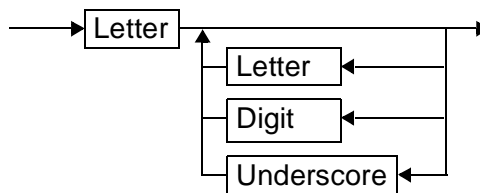


SW Variable

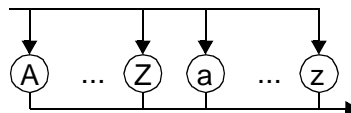


B.9 Lexical Declarations

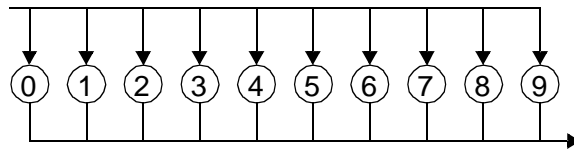
Ident



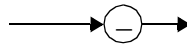
Letter



Digit



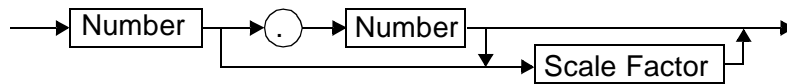
Underscore



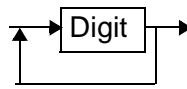
Point



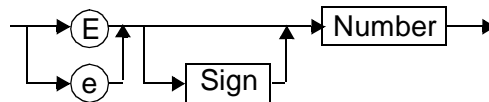
Unsigned Real



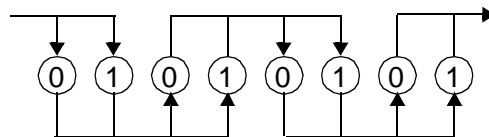
Number



Scale Factor

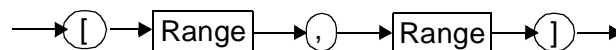


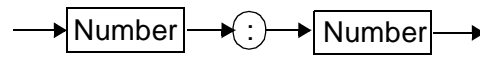
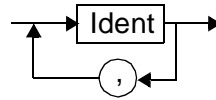
FourBitVector



B.10 Common Production Rules

Decl-Size



Range**Name-List****Data Type**