

#### IV. SPECIAL LANGUAGE CONSIDERATIONS AND FORMAL TOOLS

##### *Languages as Tools - Interactive Program Construction*

Computers are powerful information management tools. Programs are themselves information, and computers can assist in all aspects of their construction. The deficiencies of currently available tools suggest some clear next steps towards an integrated programming environment. It is interesting to speculate about systems for programming in the mid to late 1980's.

Programming languages can have a significant effect on the reliability of the programming process, on the ability to remove or tolerate program faults, and on the possibility of reasoning about programs. These effects are of concern when using a particular language, choosing the language in which to program, and designing new languages.

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