



## Introduction

**Hi-C** is a source code to hypercode translation system. Utilizing the GNU etags utility, Hi-C parses source code bases and generates the corresponding HTML pages. Symbol definitions and declarations are crosslinked, making navigation of legacy codebases straightforward. In addition, index pages are created for each unique symbol in the source code, and linked to each use of that symbol in the source files. Hi-C currently understands code written in over 18 languages.

Hi-C makes it easy for development groups to quickly get up to speed on unfamiliar or legacy source code bases.

## System Description

Hi-C is designed to be extremely lightweight, flexible, and easily adoptable by a development group or organization. Because Hi-C uses the GNU etags utility (included with the popular GNU Emacs editing system on all platforms), it is able to scale to extremely large codebases. System administrators provide Hi-C with a list of source files to be processed, and Hi-C quickly generates HTML hypercode.

Hi-C can be run nightly to automatically generate up-to-date snapshots of an organization's codebase. Additionally, Hi-C can be integrated with Configuration Management systems to regenerate the hypercode representations upon checkin and approval of code modifications. Hi-C also assists code-walkthroughs and what-if analysis.

## Features

### Scalability

Hi-C is built around the GNU etags system. Hi-C calls etags to process source files and then parses the resulting TAGS database. Because of this integration, Hi-C scales easily to the large codebases commonly found in military and industrial systems.

### Language Support

Hi-C understands code written in over 18 languages. These include C, C++, Objective C, COBOL, Erlang, FORTRAN, Java, Lisp, Pascal, Perl, Postscript, Proc, Prolog, Scheme, Tex/LaTEX, YACC, and OTHER (a mode for unsupported languages). In addition, codebases may include multiple languages.

## General Specifications

Hi-C is written in 100% Pure Java 2. We have successfully tested Hi-C on Sun Solaris, SGI Irix, GNU Linux, and Windows NT server hardware. A web server (e.g., Netscape, Microsoft, or Apache) is needed to serve HTML content. Memory and disk space requirements vary with codebase size.

## Availability

Hi-C is available *now* for free licensing. Download from <http://www.psl.cs.columbia.edu/>.  
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