

Release Notes for XXICC revision 0.0h

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This document describes enhancements and bug fixes for XXICC revision 0.0h, released 25 October 2013. 0.0h is a major release and adds GalaxC extensions for hardware design, hierarchical figure editing and simulation, and significant improvements to XOE figure editing.

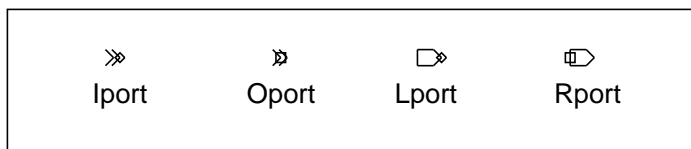
1. GalaxC Language

- XXICC now includes extensions to the GalaxC language for digital hardware design, called GCHD (GalaxC for Hardware Design). See Chapter 10 of *The XXICC Anthology* rev 0.0h for details on writing and simulating GCHD.
- If variable `v` is of type `type`, then `&v` converts the `type` value `T` of `v` to `&T`. If you want a reference to variable `v`, you must instead use the expression `refTo(v)` which is implemented as a generic macro in `gxclib.gal`.
- You can now have constants of type `type` in GalaxC programs. Before 0.0h GalaxC did not tag `type` constants correctly in PSI code so that they could be saved in `.gi` files.

2. XOE

XOE figure editing has many improvements in 0.0h. See Chapter 8 of *The XXICC Anthology* for the latest version of “XOE Figure Editing”. Here are the major changes:

- You can now select one or more `FIGtext` objects and select a different style or font using the XOE Style menu or keyboard equivalents. This is new, so it has not been fully tested.
- You can now attach `FIGtext` to nets.
- We have added module port symbols to `ports.xoe`:



- You can now simulate hierarchical logic diagrams. See §8.8 of *The XXICC Anthology* for an example.
- See §8.9 and §8.10 of *The XXICC Anthology* for updated lists of hints and figure editing issues.
- XOE now checks that you have compiled a file using `F6` or `sh-F6` since the last change before allowing you to run it using `ctl-F6`. It also checks that you are running the same file you compiled. The `sh-F6` command now reloads and runs the `.gi` file it writes, unless the file is part of XOE

itself. The `ctl-F6` command now runs the `.gi` version if you compiled using `sh-F6`. See §4.3 of *Compiling and Running GalaxC Programs* rev 0.0h for details.

3. Bug Fixes

- Fixed issue #18: “Error pasting from documents with figures and submods in 0.0g”.
- Fixed bug in XOE figure editor: when editing while zoomed in, shapes sometimes moved to the wrong location.
- Fixed bug in XOE figure editor: select all (`ctl-A`) did not select lines.
- Fixed GalaxC compiler pattern match failures that occurred when an expression’s syntax matched a pattern but a subexpression did not compile successfully. In some cases -- for example, when the pattern includes parentheses -- GalaxC said it could not match the expression instead of trying other patterns.