ObjectMaker
by Mark V Systems Limited

- **Diagram editing and layout for analysis & design**
- **27+ Graphical Design Methods**
- **Extension language rules draw, check, & interface**
- **Ada Code Generation & Reverse**

    $\Rightarrow$ **we had a home-made Ada parser**

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An ASIS Experience: ASIS is Cost Effective

- **The original ObjectMaker offering is *AdaGen*:**
  - **home-made Ada Parser in YACC (1984)**
  - **home-made Ada semantics analyzer in Prolog (1987)**
  - **home-made Buhr-diagram layout in Prolog (1988)**
- **Cost of product: 1 - 2 persons '86 - '93, ¼ person '93 - '96**
- **ASIS based replacement (tailorable graphics notation):**
  - **initial GNAT release for STC '97: 1 pers. × 1 wks. '97**
  - **additional compilers maybe ½ - 1 wk. each**

  ⇒ we dropped the price!

ASIS is Easy

- **Learned by studying appendices of ASIS spec.**
- **Used "display_source" example to build "diagram_ada"**
  - **written in Ada-95, produces consultable intermed. file**
  - **parse *on-the-fly* or use *precompiled trees***
  - **subsystem partioning flexibility**
- **ObjectMaker rules consult intermed. file to draw**
  - **rules support custom filtering, shape selection, etc.**
  - **examples diagram with dependency, call trees**
  - **future class dependency and other OO diagrams**
  - **user specified diagrams**

Compiler Issues

- **Initial release supports use of GNAT compiler**
  - **diagram_ada can be run on individual modules**
  - **or on prebuilt GNAT trees**
  - **makefiles give flexibility in partitioning into diagrams**
- **ASIS interfaces expected soon from other compilers**
  - **only a subset of ASIS features are used**

Future Work

- **Support for other compilers**
- **Interface to debuggers/profilers for dynamic semantics**
- **More diagram notation styles as requested by users**
- **Direct interface between ASIS and ObjectMaker (vs. files)**
- **GUI-based control of system diagram partitioning**
- **Direct interface with Ada documentation generation systems**