



Hierarchy Builder

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Disclaimer: this talk is an advertisement

What we sell today:

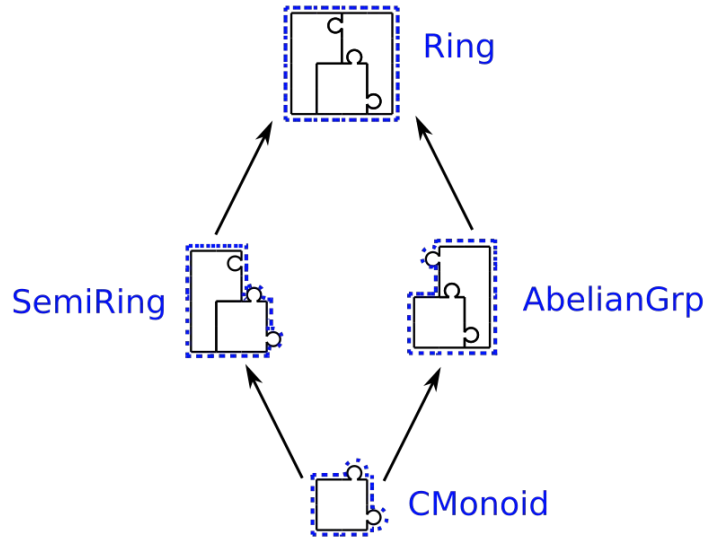
- Hierarchy Builder (**HB**) is a tool to organize libraries around a hierarchy of interfaces
- **opam** install coq-hierarchy-builder
or **nix-shell** -p coq_8_11 -p coqPackages_8_11.hierarchy-builder

If you like to know more:

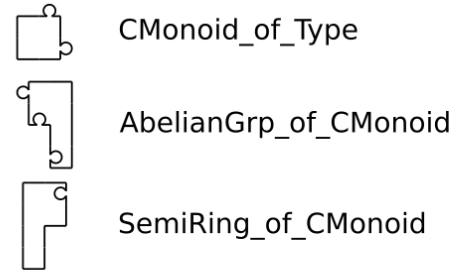
- Formal language & its compilation to packed classes presented at **FSCD** [\[PDF\]](#)
- Implemented in the **Elpi** extension language for Coq [\[Coq-Elpi Extension\]](#) [\[HB sources\]](#)

Demo [.v file]

The hierarchy of structures



The puzzle pieces (mixins)



The "virtual" puzzle pieces (factories)



Status

- Version 0.9.x works on Coq 8.10, 8.11, 8.12
 - Does not support structures with parameters (e.g. a module over a ring)
 - Does not support hierarchies of morphisms
- Master branch (next release) works on Coq 8.11, 8.12
 - Supports structures with parameters!
- In progress:
 - “Porting” Mathematical Components to HB/master
- Trivia:
 - 1800 lines of Elpi including 200 l. of types, 300 l. of comments and 300 l. of blanks

Thanks!

Questions?