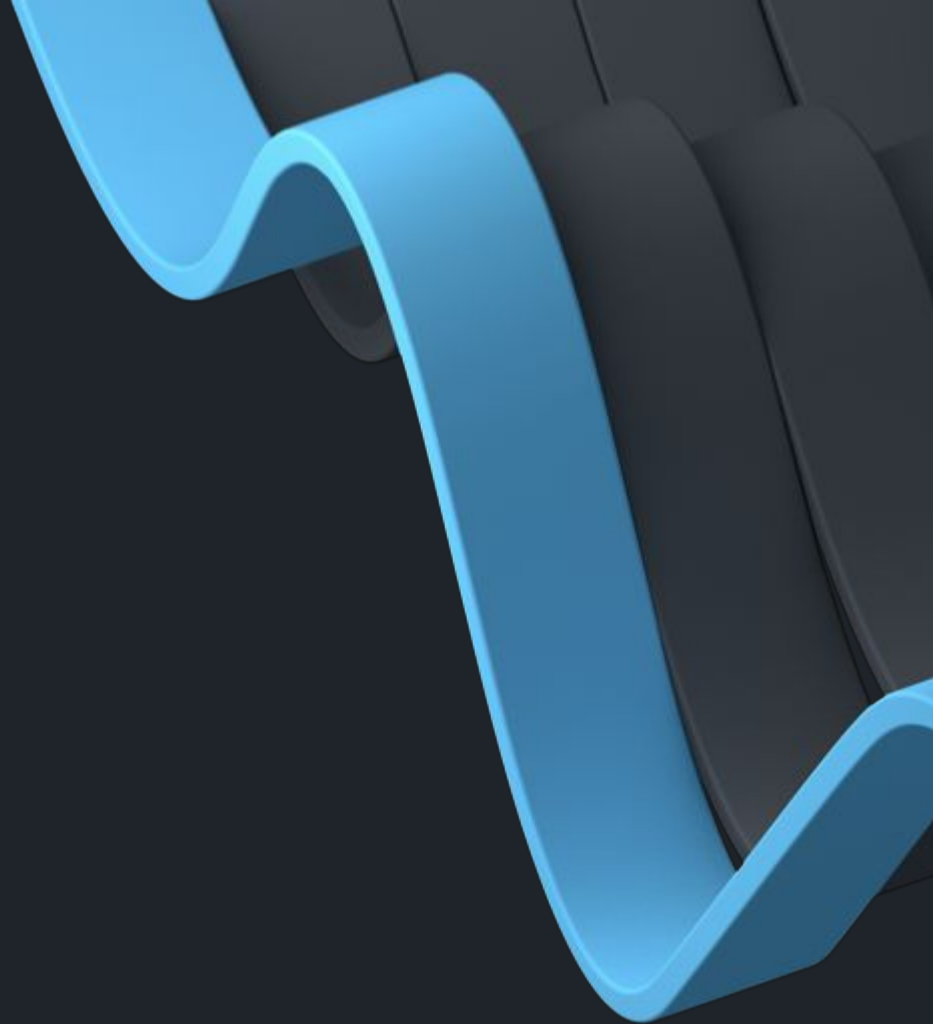


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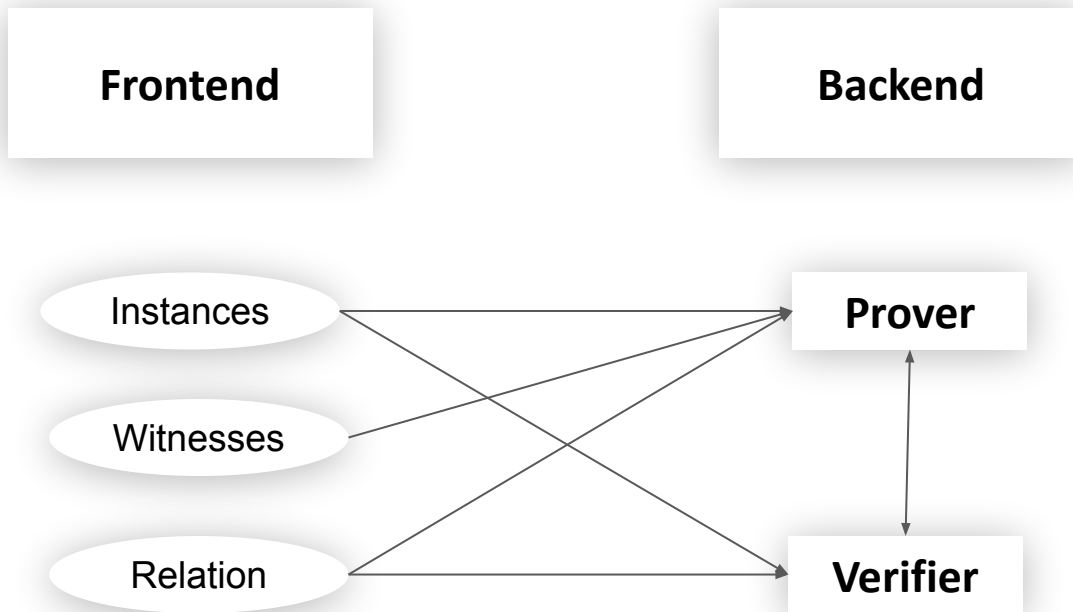
ZKinterface

November 2022

Constance Beguier



Architecture



Intermediate Representation: R1CS? Arithmetic circuit?
Boolean circuit? Tasks graph ? High-level representation?

Intermediate Representation Goals

IR community

Global adoption
Maintainability
Easily extensible

Frontends/backends

Easily pluggable
Efficiency
Support complex features

It is just a representation.
Keep it as simple as possible !

Core IR and plugins library

**Core IR
(Arithmetic gates)**

**Plugins library
(advanced features)**

- Core IR must be easily pluggable to all backends and frontends
- More advanced backends could support more advanced features described in the plugins library

Conclusion

Benefit of a simple representation (core IR)

- Easy to use for newcomers
- Maintainability
- Easily pluggable in frontends/backends

Benefit of the plugins library

- Easy to add new advanced features
- While keeping a stable and simple common syntax



Thanks
Questions ?

Constance Beguier
constance@qed-it.com