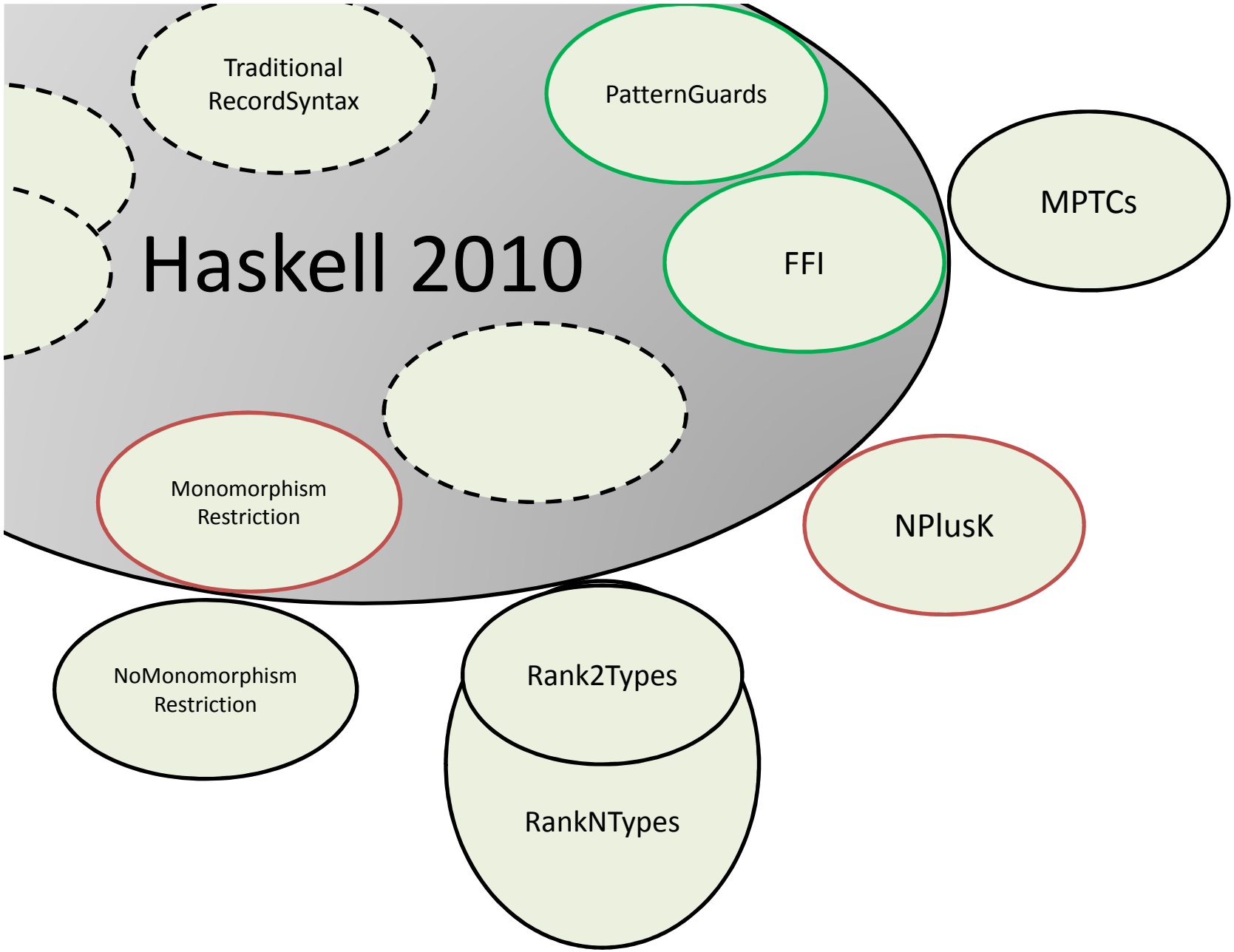
Hmm…


Traditional
RecordSyntax
PatternGuards
MPTCs
Haskell 2010
FFI
Monomorphism
Restriction
NPlusK
NoMonomorphism
Restriction
Rank2Types
RankNTypes

Haskell Modular Mindset

- Haskell truly is modular – that's great!
- Being precise about modularity helps inter-op.
- Modularization is cheap!
- Haskell 2010 is NOT monolithic – we just haven't explored the modules yet.

```
module Foo where

import C

foo :: (C a b) => a -> b
foo = …
```

```
[1 of 2] Compiling C              ( C.hs, interpreted )
[2 of 2] Compiling Foo            ( Foo.hs, interpreted )
Ok, modules loaded: C, Foo.
*Foo>
```

MPTCs and GHC

- With MultiParamTypeClasses on (and only then), GHC allows declaration of
  - Classes with multiple parameters
  - Instances of classes with multiple parameters
- Without MultiParamTypeClasses, GHC still allows constraints mentioning classes with multiple parameters
  - No flags needed, but not Haskell 2010!

My solution

1. Define: MultiParamTypeClasses, as GHC.
2. Define: MultiParamConstraints, enables mentioning MPTCs in class constraints only.
3. Let MultiParamTypeClasses imply/subsume MultiParamConstraints.
4. Have GHC enable MultiParamConstraints by default.

This makes the discrepancy clear, and gives other tools (e.g. haskell-src-exts) the ability to simulate GHC's behavior, without ad-hoc ugliness.

I LOVE GHC!