# Q: How can we allow people to be more expressive when communicating _to_ and through computers?

Ohm is a library and domain-specific language for parsing and pattern matching. The language is based on parsing expression grammars (PEGs), a simple and straightforward way to formally describe syntax. One of the main goals of Ohm is to make it easier to prototype and implement new programming languages. More →
(Joint work with Alex Warth)

```
Arithmetic {
  Expr = AddExpr
  AddExpr = AddExpr "+" PriExpr -- plus
          | AddExpr "-" PriExpr -- minus
          | PriExpr
  PriExpr = "(" Expr ")" -- paren
          | ident
          | number
  ident = letter alnum*
  number = digit+
}
```

Ohm Visualizer: While PEGs offer a simple and succinct way to define parsers, they suffer from the same problem as many DSLs: they are challenging to write and debug. The goal of the Ohm visualizer is to make it easier to develop grammars for Ohm, by allowing developers to see exactly how their grammar works when parsing a particular input. Demo →
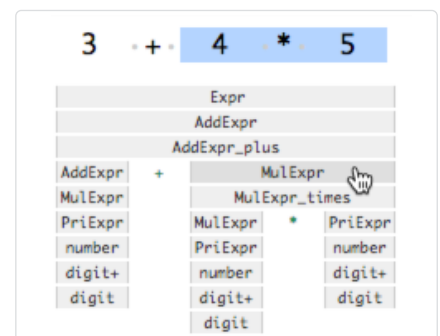
Moonchild is a toolkit for experimenting with new kinds of programming interfaces. It's based on CodeMirror, a web-based text editor. Moonchild adds a framework which makes it easy to create plugins (written in HTML and JavaScript) which modify and extend the source code presentation. Demo →
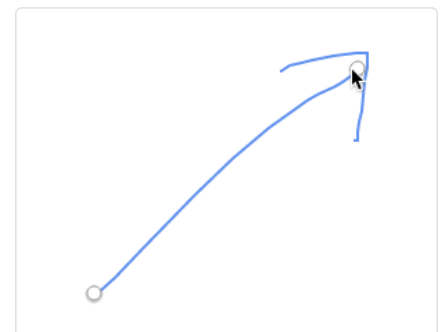

Skiss is a prototype web-based drawing tool which aims to be a "magic sketchbook": as expressive and informal as paper, but with the kinds of features you'd expect from traditional graphics software. Alex and I are planning on developing a remote collaboration tool based around this concept. GIF demo →

Hi, I'm Patrick Dubroy.

I've been working with VPRI and CDG since August 2014, mostly working with Alex (though I live in Munich). Before that, I worked at Google on Chrome and Android, built and designed multitouch UIs at BumpTop, and worked on virtual machines at IBM. When not computing, I like to bike (even in LA!), cook, and bake bread.