

Ruff: 硬件上的JavaScript

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ruff.io



Programmer

Agile

Open Source

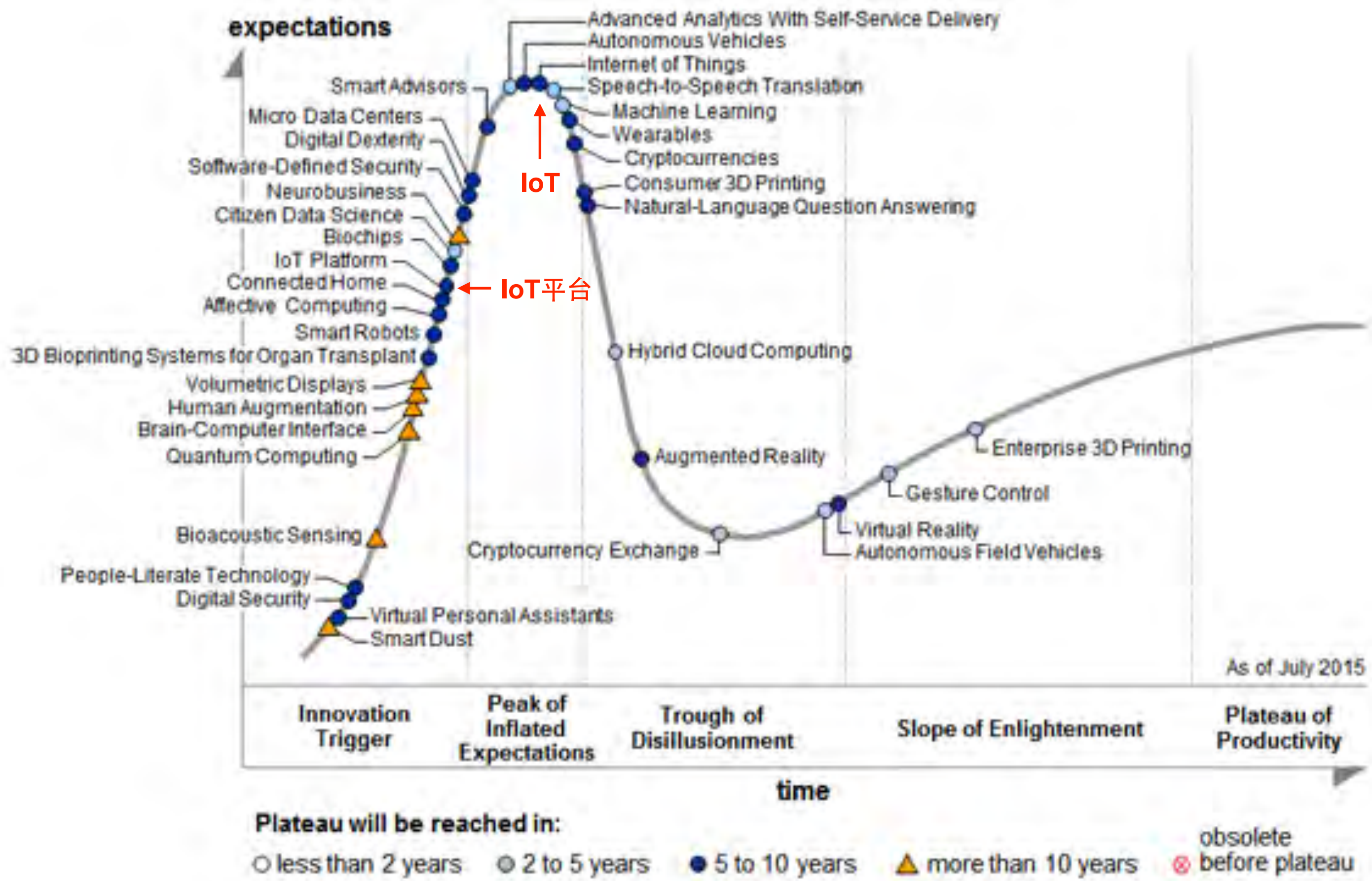
Hardware

Blogger

自我介绍



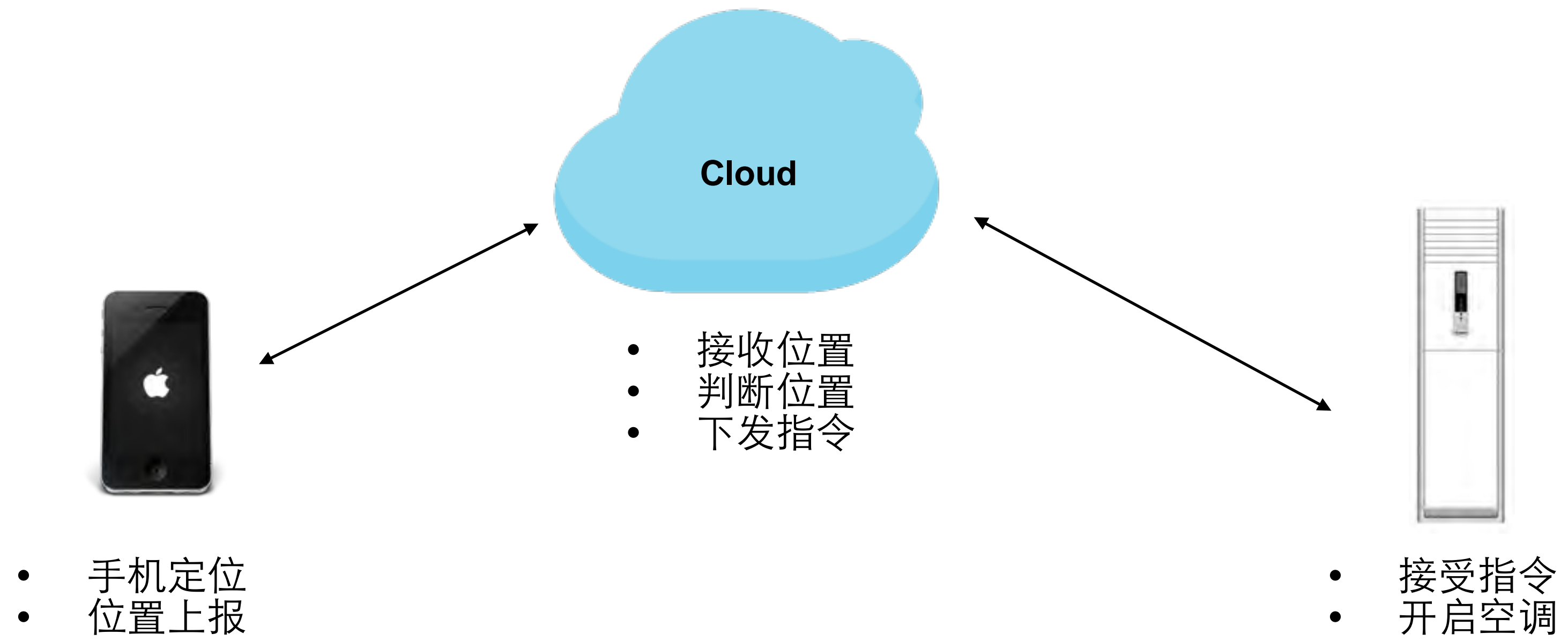
你可曾想过做一款自己的智能硬件？



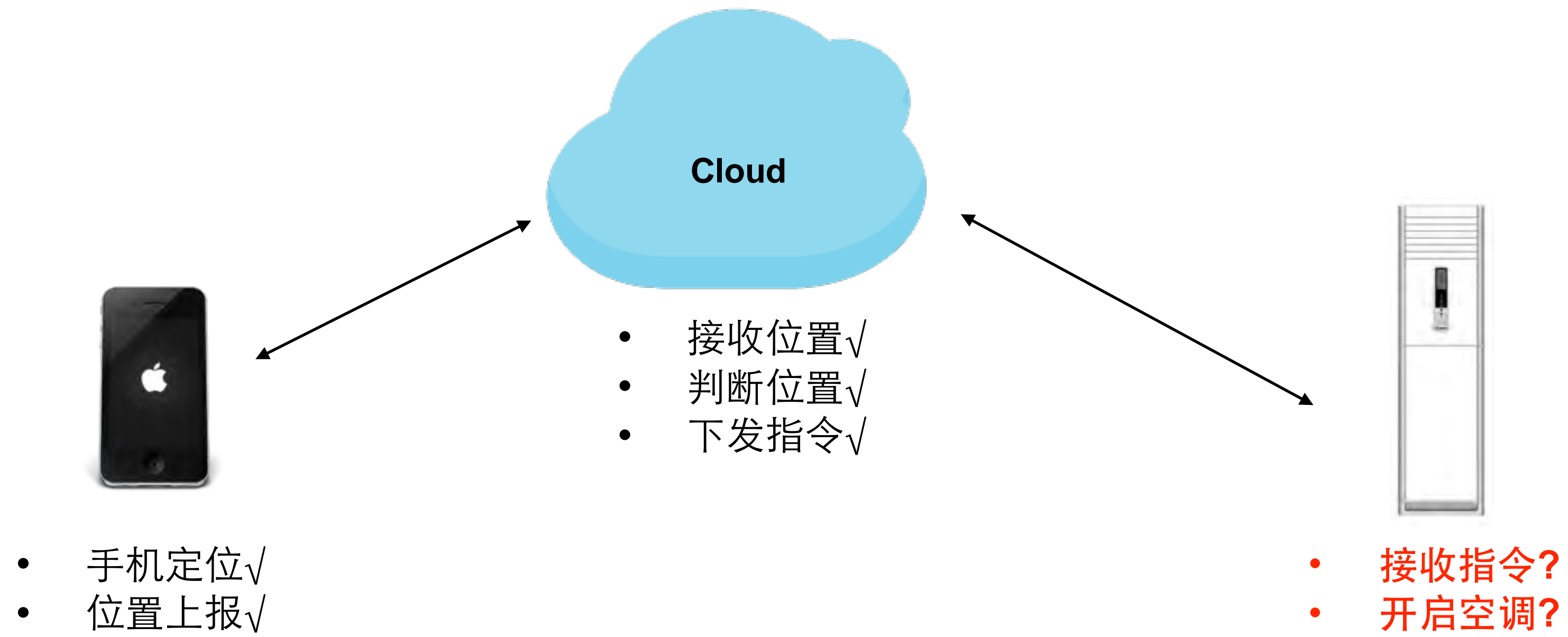
物联网：趋势所在



进入小区，打开家里的空调



任务分解



有难度?

GPIO C 板卡烧写
数据手册
寄存器 线路连接

硬件开发

Ruff

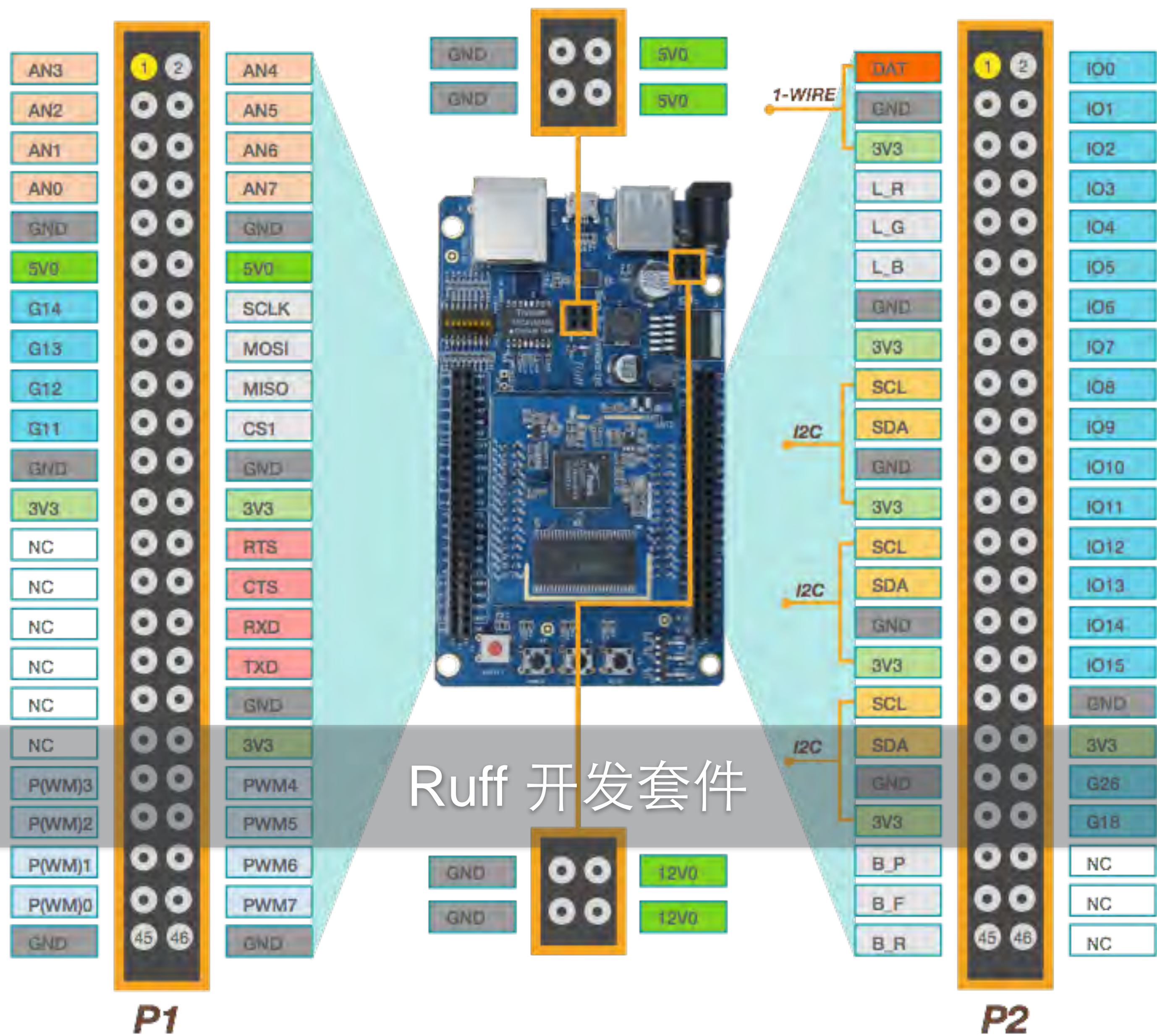
```
'use strict';

$.ready(function (error) {
    if (error) {
        console.log(error);
        return;
    }

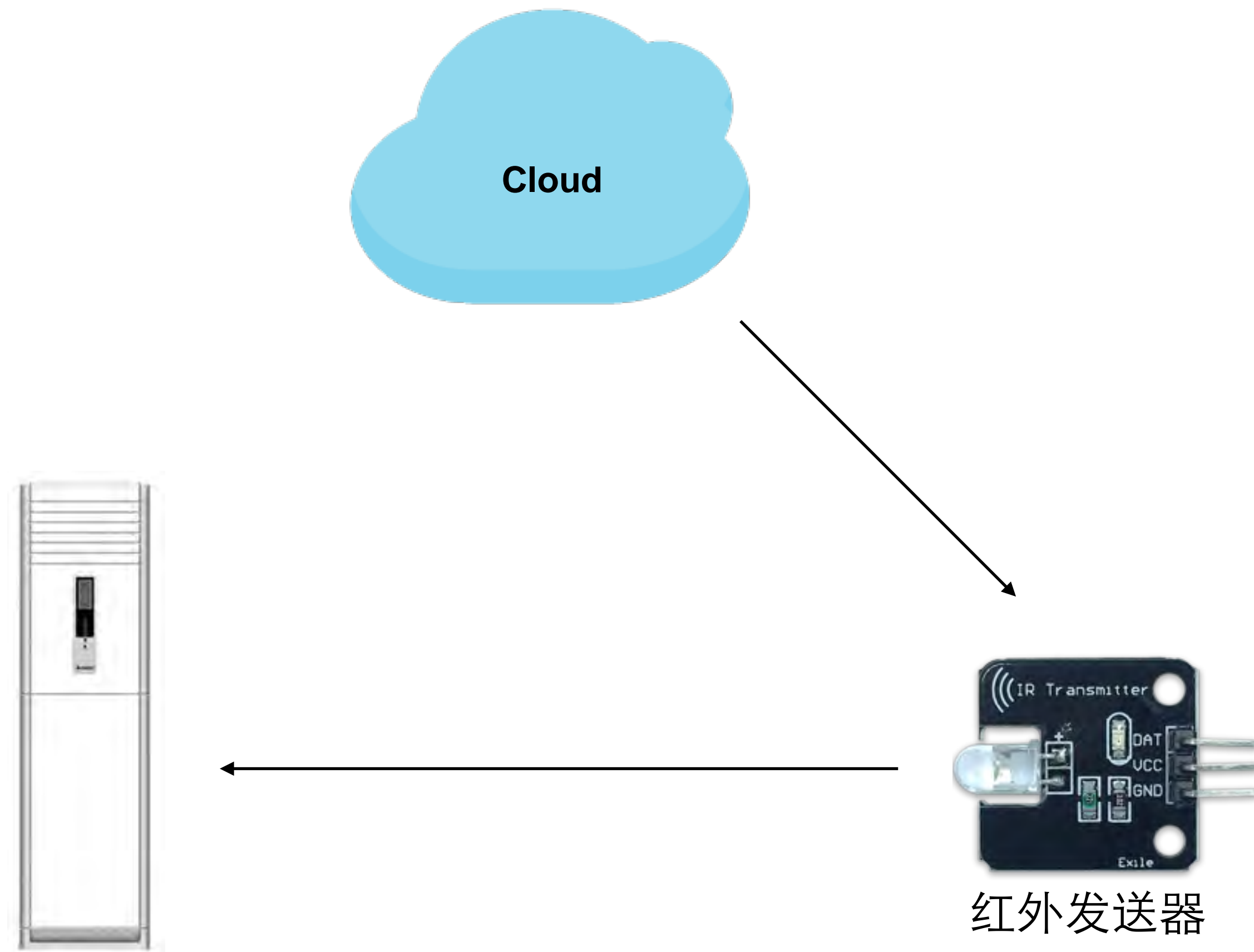
    $('#led-r').turnOn();
});

$.end(function () {
    $('#led-r').turnOff();
});
```

第一次亲密接触



Ruff 开发套件



红外发送器

改造方案



IR Transmitter

用途描述

Infrared Send

关键字

红外发送,IR,infrared

型号版本

IRT-01

驱动

[ruff-v1-infrared-sender](#)

rap.ruff.io: 找寻设备

```
> rap init  
> rap device add controller -m IRT-01  
> rap layout
```

添加设备

```
var net = require('net');

$.ready(function(error) {
  ...

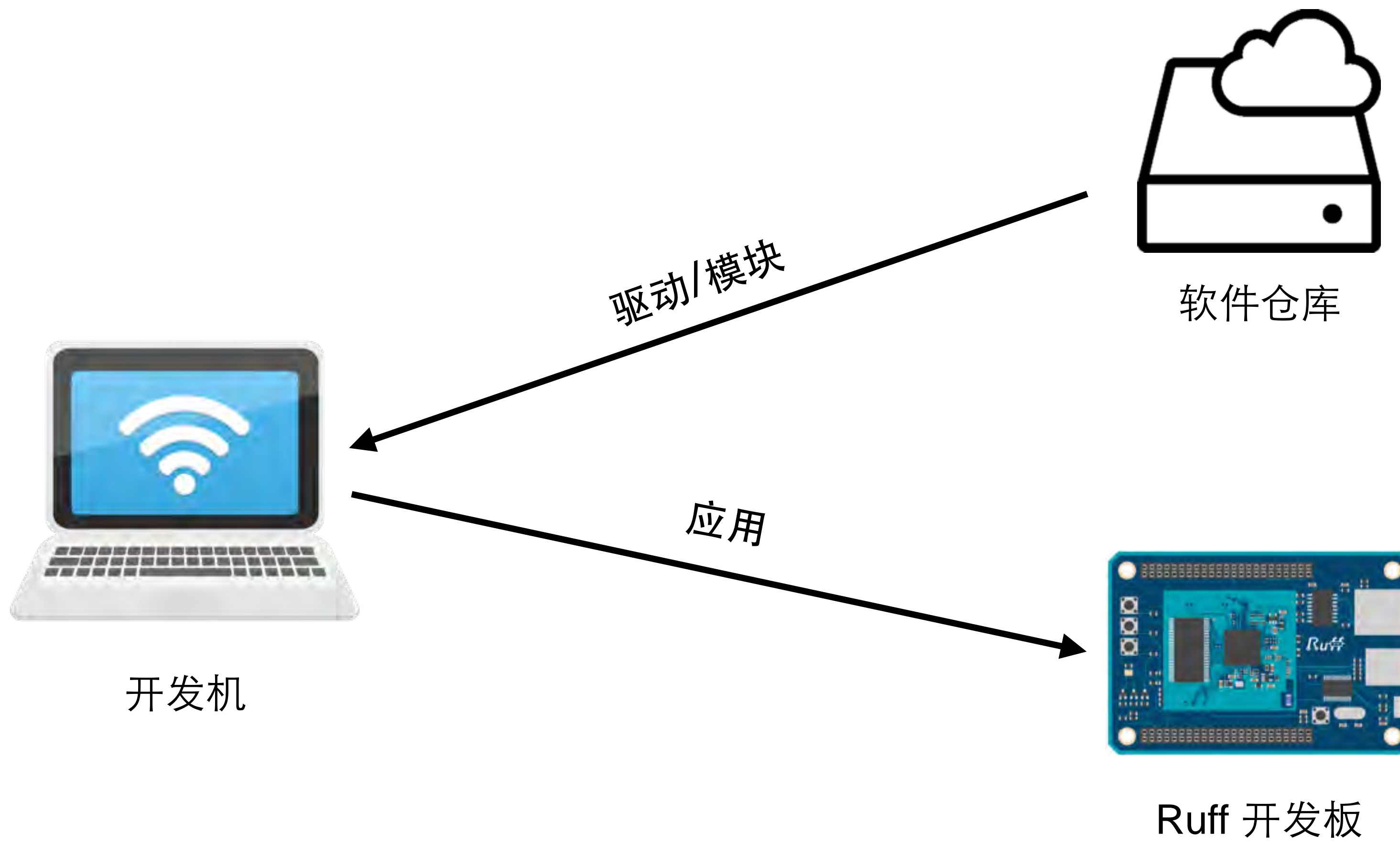
  var client = new net.Socket();
  ...

  client.on('data', function(data) {
    if (data === 'turnOn') {
      $('#controller').send('your_code', function() {
        });
      }
    });
    ...
  });
```

编写应用

```
> rap deploy  
> rap start
```

部署应用



应用开发

scaffolding

Package

Device

Application

Firmware

现代软件开发: rap

```
var assert = require('assert');
var path = require('path');
var test = require('test');

var appRunner = require('ruff-app-runner');
var mock = require('ruff-mock');


var verify = mock.verify;

var appPath = path.join(__dirname, '..');

module.exports = {
  'test should run application': function () {
    appRunner
      .run(appPath, function () {
        verify($('#led-r')).turnOn();
      })
      .end(function () {
        verify($('#led-r')).turnOff();
      });
  }
};

test.run(module.exports);
```

One More Thing: 测试先行



將原型投入生产？

PCB Layout 工业设计

MCU

供应链

功耗

硬件生产



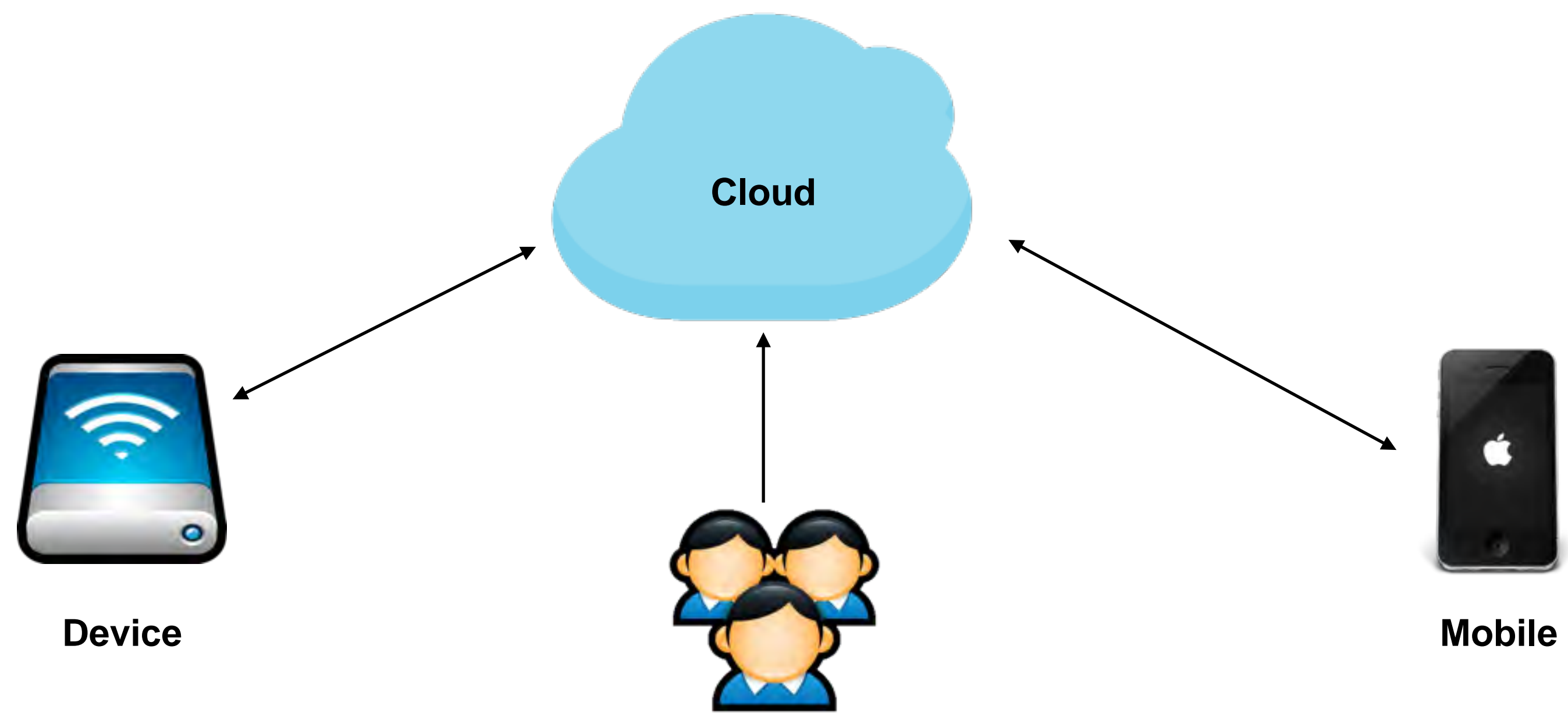
Ruff 的未来



生产：能力与服务



连接：硬件开发者之殇



IoT 应用：一站式开发

Ruff



欢迎进入新时代

ruff.io