



Open source, the engine behind the third and fourth industrial revolutions

Gilles Gravier

Director, Senior Advisor – Open Source / Blockchain

20190211 – FOSSC, Muscat, Oman

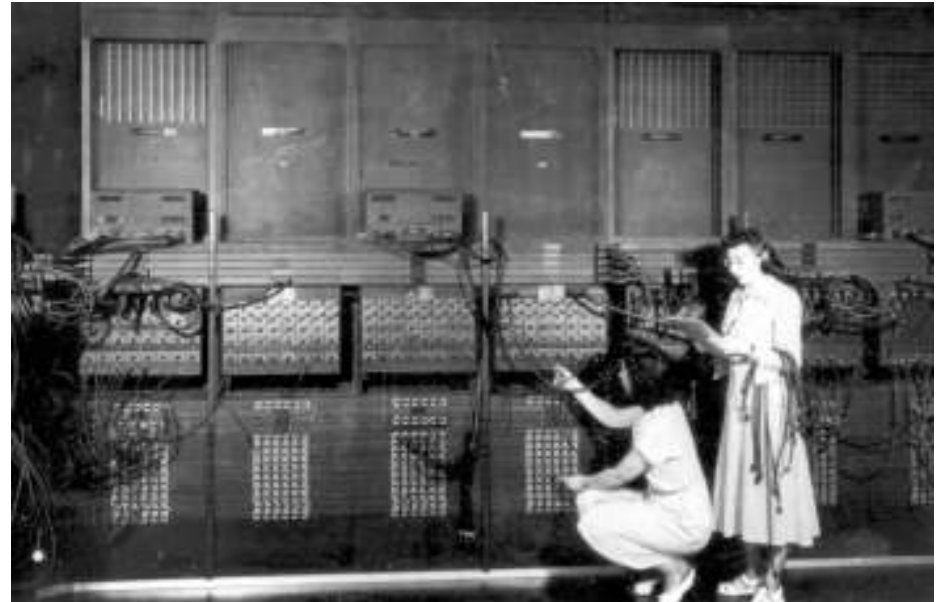
A brief history of time

From an Open Source perspective

1950-60s

Source code is always there

- Academic
- Operating systems



A brief history of time

From an Open Source perspective

1969

- IBM vs United States anti trust suit
- Software becomes commercial instead of freely bundled



A brief history of time

From an Open Source perspective

1983

- Richard Stallman
- Free Software
- FSF



A brief history of time

From a source code perspective

1997-1998

- Netscape
- ESR and Christine Peterson
- Open Source
- Open Source Initiative



Defining Free Software

One definition to rule them all

For the sake of liberty

- The freedom to run the program as you wish, for any purpose (freedom 0).
- The freedom to study how the program works, and change it so it does your computing as you wish (freedom 1). Access to the source code is a precondition for this.
- The freedom to redistribute copies so you can help others (freedom 2).
- The freedom to distribute copies of your modified versions to others (freedom 3). By doing this you can give the whole community a chance to benefit from your changes. Access to the source code is a precondition for this.



<http://www.fsf.org/>

Defining Open Source

One definition to rule them all

For the sake of consistency

1. Free Redistribution of Source Code
2. Source Code Available
3. Allows Derived Works
4. Allows Integrity of Author's Source Code
5. No Discrimination Against Persons or Groups
6. No Discrimination Against Fields of Endeavor
7. Distribution of License with Code
8. License Must Not Be Specific to a Product
9. License Must Not Restrict Other Software
10. License Must Be Technology-Neutral



<http://www.opensource.org/licenses/>

To sum it up

An open source license gives you permission, in advance, to innovate by using, studying, improving and sharing code. But , it also comes with obligations for developers making use of it.

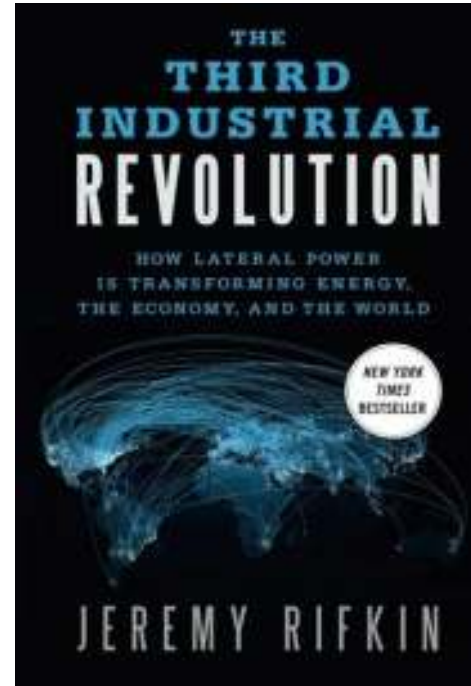
<http://choosealicense.com/>

Let's talk about a revolution

Third time is a charm

1970s - now

- Term coined in 2011 by Jeremy Rifkin
- Automation
- Electronics
- Computers
- Telecommunications
- Energy

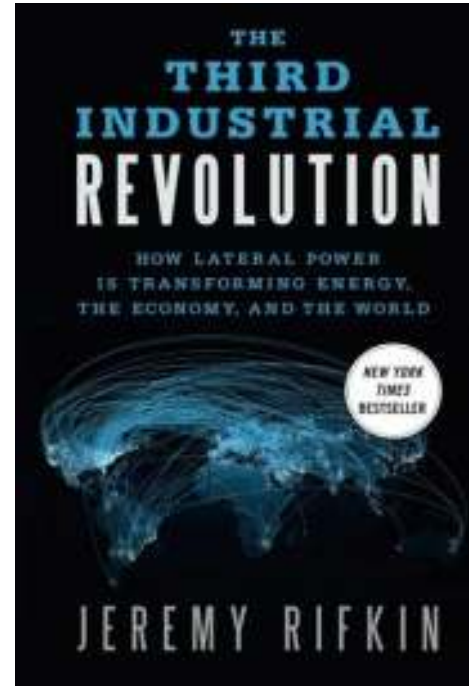


Let's talk about a revolution

Third time is a charm

1970s - now

- Just in time for Free Software and then Open Source
- RFCs defined the internet
- The original protocols (IP, TCP/UDP, HTTP...)
- The first popular operating environments (Linux, X11, GNOME)
- The first servers (CERN httpd)
- The first commercial internet. Suddenly everybody is connected!



What about the fourth?

May the fourth be with you

Now

- Term coined in 2016 by World Economic Forum
- Overlaps with the 3rd as defined by Rifkin (who says it's the same)
- Cyber-everything
- Network-everything
- Biological interactions
- Everything talks to everything (aka IoT)
- Blockchains



What about the fourth?

May the fourth be with you

I mean right now!

- Jeremy Rifkin at CREA Digital Day 2019 (Geneva)
 - *The new model of connectivity, energy (generation), mobility and IoT leverages blockchain and works best if opensource.*
- Blockchains were invented in the 1990s
- Almost all are open source (Hyperledger, Ethereum, Stellar, IOTA, Bitcoin...)
- Creating the shared economy for the 4th revolution
- Powering the world of IoT



Where will it lead?

We make the future in our image, by creating, or contributing to, the open source projects that reflect the world we want our children to live in.



Thank you

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<https://www.linkedin.com/in/gillesgravier>



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