GPL license compliance

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November 4, 2011

About Armijn

- using Open Source software since 1994
- MSc Computer Science from Utrecht University (The Netherlands)
- core team `gpl-violations.org` since 2005
- ex-board member at NLUUG (`http://www.nluug.nl/`)
- sysadmin, developer and consultant at Loohuis Consulting (2006 - May 2011)
- May 2011 - present: owner Tjaldur Software Governance Solutions

Subjects

- license enforcement across the world
- cause of license violations in consumer electronics
- short overview of tooling and processes

I will not talk about software patents.

License enforcement

- Europe (Germany, France) & USA
- focus is on GPLv2 and LGPLv2/2.1
- done by companies (Nokia, Red Hat) and individual developers (Harald Welte, BusyBox, etc.)

Reactions from companies

Companies are often quite mad when confronted:

- dispute the license ("but it's free!")
- they have done everything in good faith ("go to my supplier, it's their fault")
- no clue about their own responsibility ("but the competitor is doing it too!")

Bummer.

Background about violations

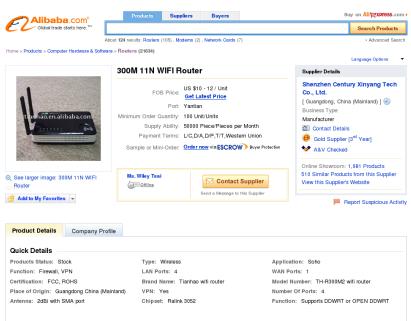Everyone makes mistakes, but mistakes need to be fixed:

1. understand
2. acknowledge
3. fix
4. prevent

Consumer electronics: the truth

Almost everything is purchased pre-fab in Asia. Making everything yourself is commercial suicide:

- extremely thin margins
- cut throat competition
- quality is less important than price
- "cowboys"

It's like Nike: don't do any production, just marketing and sales.

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300M 11N WIFI Router

FOB Price: US $10 - 12 / Unit
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Port: Yantian

Minimum Order Quantity: 100 Unit/Units

Supply Ability: 50000 Piece/Pieces per Month

Payment Terms: L/C,D/A,D/P,T/T,Western Union

Sample or Mini-Order: **Order now** via **ESCROW** Buyer Protection

🔍 See larger image: 300M 11N WIFI Router

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✉ **Contact Supplier**
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Supplier Details

Shenzhen Century Xinyang Tech Co., Ltd.

[Guangdong, China (Mainland)] 🕐

Business Type:

Manufacturer

📧 Contact Details

🥇 Gold Supplier [3rd Year]

🔷 A&V Checked

Online Showroom: 1,981 Products

510 Similar Products from this Supplier

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| **Product Details** | Company Profile |

Quick Details

Products Status:	Stock	Type:	Wireless	Application:	Soho
Function:	Firewall, VPN	LAN Ports:	4	WAN Ports:	1
Certification:	FCC, ROHS	Brand Name:	Tianhao wifi router	Model Number:	TH-R300M2 wifi router
Place of Origin:	Guangdong China (Mainland)	VPN:	Yes	Number Of Ports:	4
Antenna:	2dBi with SMA port	Chipset:	Ralink 3052	Function:	Supports DDWRT or OPEN DDWRT

Packaging & Delivery

Packaging Detail: Neutral color box 1pc/ color box 20pcs/ carton

Problem source: supply chain

License violations are often a direct result of a mistake made in the supply chain:

- chipset vendors
- board makers
- SDK ("Software Development Kit") vendor
- reference design makers
- product customizers
- "labellers"

The roles are not always very clearly separated. The "labellers" are legally responsible.

Experiences with Asia

Barriers:

- ▶ copyright works differently
- ▶ cultural barriers
- ▶ NDAs were mandatory for years, now source code is demanded
- ▶ GPLv2 is in English
- ▶ GPL code is seen as "public domain"

Experiences with Asia (2)

- low risk getting caught, so why bother?
- "best practices" are not applied: development processes are often quite sloppy
- everything is short term
- engineers switch companies fast, especially in Taiwan
- competitors also don't follow licenses and "save" money

How can we improve the situation in Asia (and here)?

"Put your money where your mouth is"

- education
- economic pressure
- tools
- research

Education

It's a people problem, not a technical problem!

- ► talks
- ► articles
- ► documentation in local languages (at the moment tradition Chinese)
- ► help local organisations (for example: OpenFoundry in Taiwan)
- ► train more compliance engineers

Economic pressure

- ▶ more legal cases in Europe and USA
- ▶ convince companies to use contracts to push the problem into the supply chain

Non-compliance becomes more expensive, so there is a better incentive for companies to comply.

Tools

Goal: let companies do these checks themselves.

- ▶ Binary Analysis Tool (ask me for a demo)
- ▶ integrating license scanners (Ninka, FOSSology) into (development) processes
- ▶ long term: more tooling

Academic research

There is a lot of unclarity about licenses, so we need more research:

- Finding Software License Violations Through Binary Code Clone Detection (Mining Software Repositories 2011)
- What Goes into an Executable? Identifying a Binary's Sources by Tracing Build Processes (sent to ICSE 2012, not yet accepted)
- future research

Results

The situation is improving. More and more companies are learning how to deal with Open Source Software, but slowly.

We have noticed that in Asia there is more interest in correctly following licenses.

Expectation: enough work for the coming 10 years

Questions