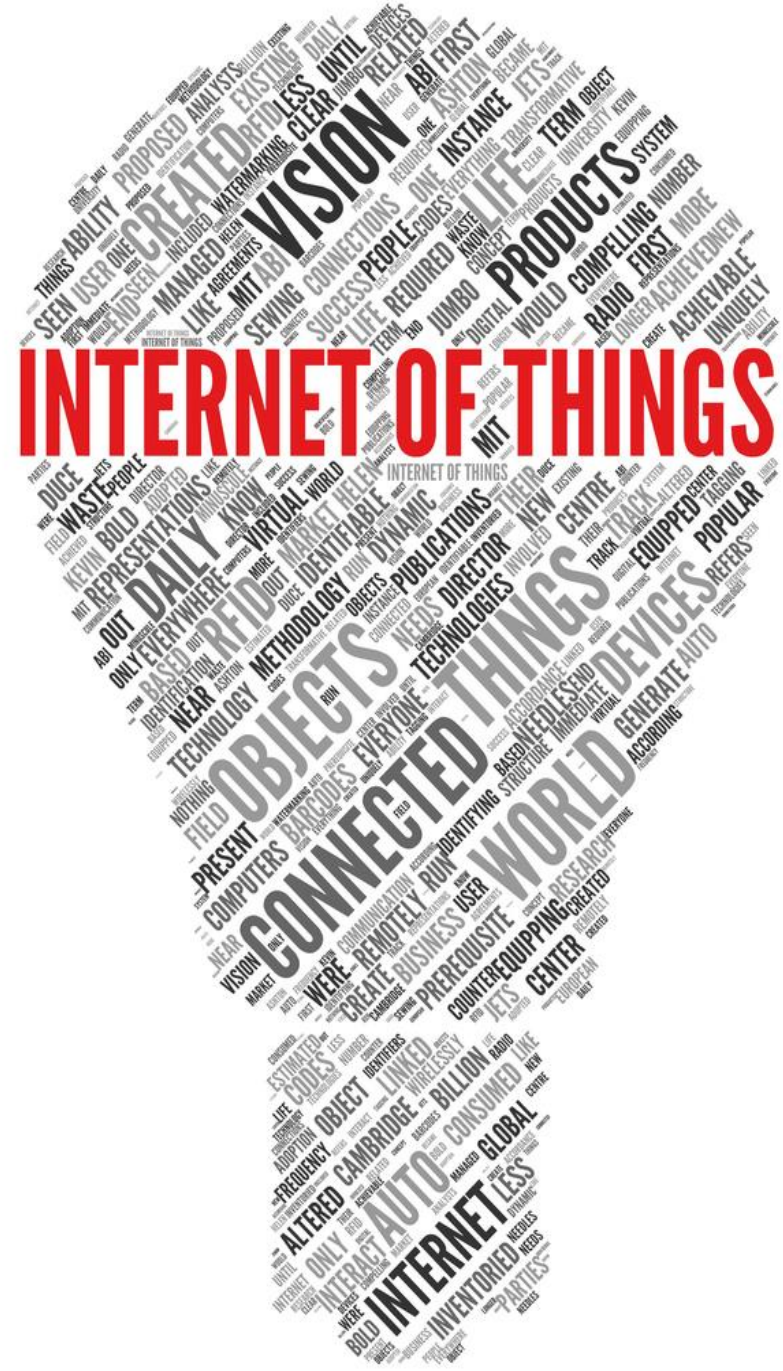
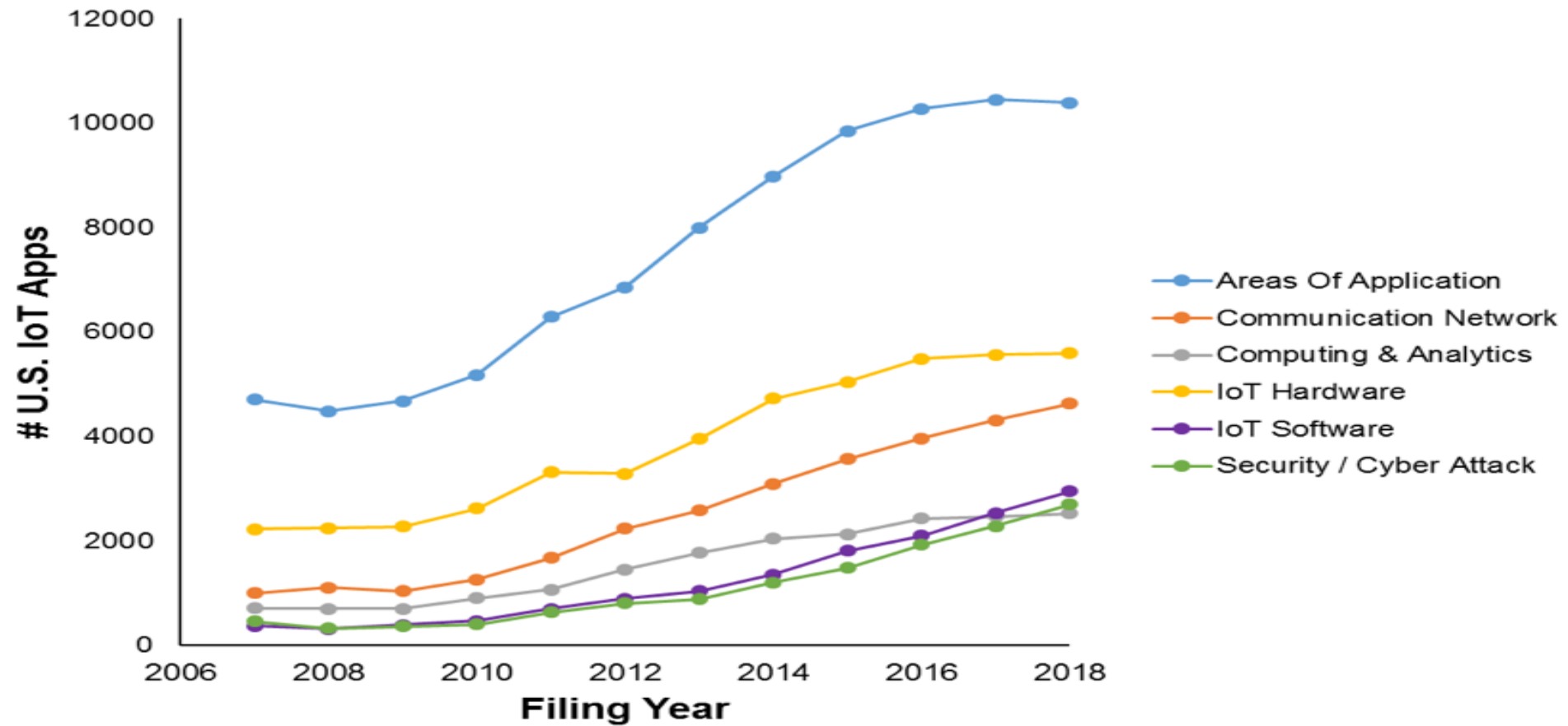
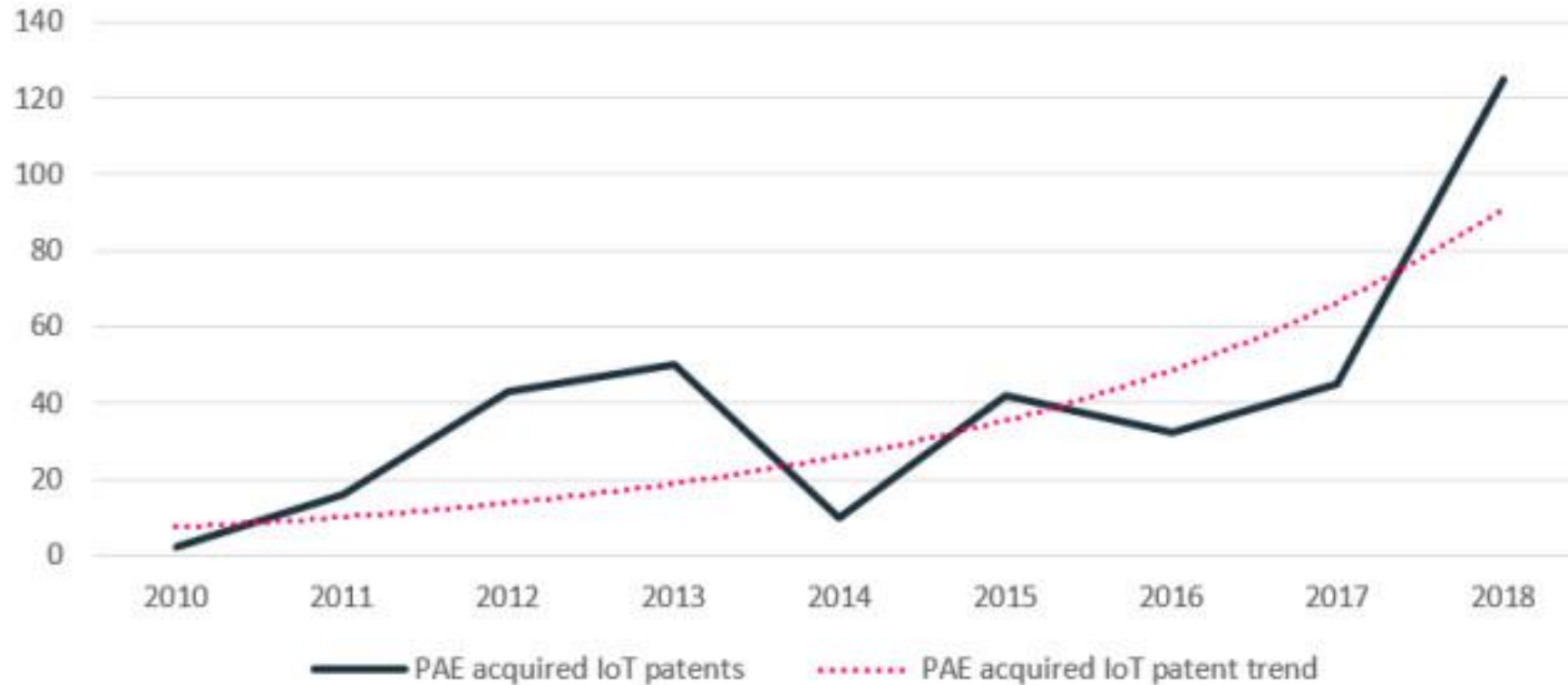


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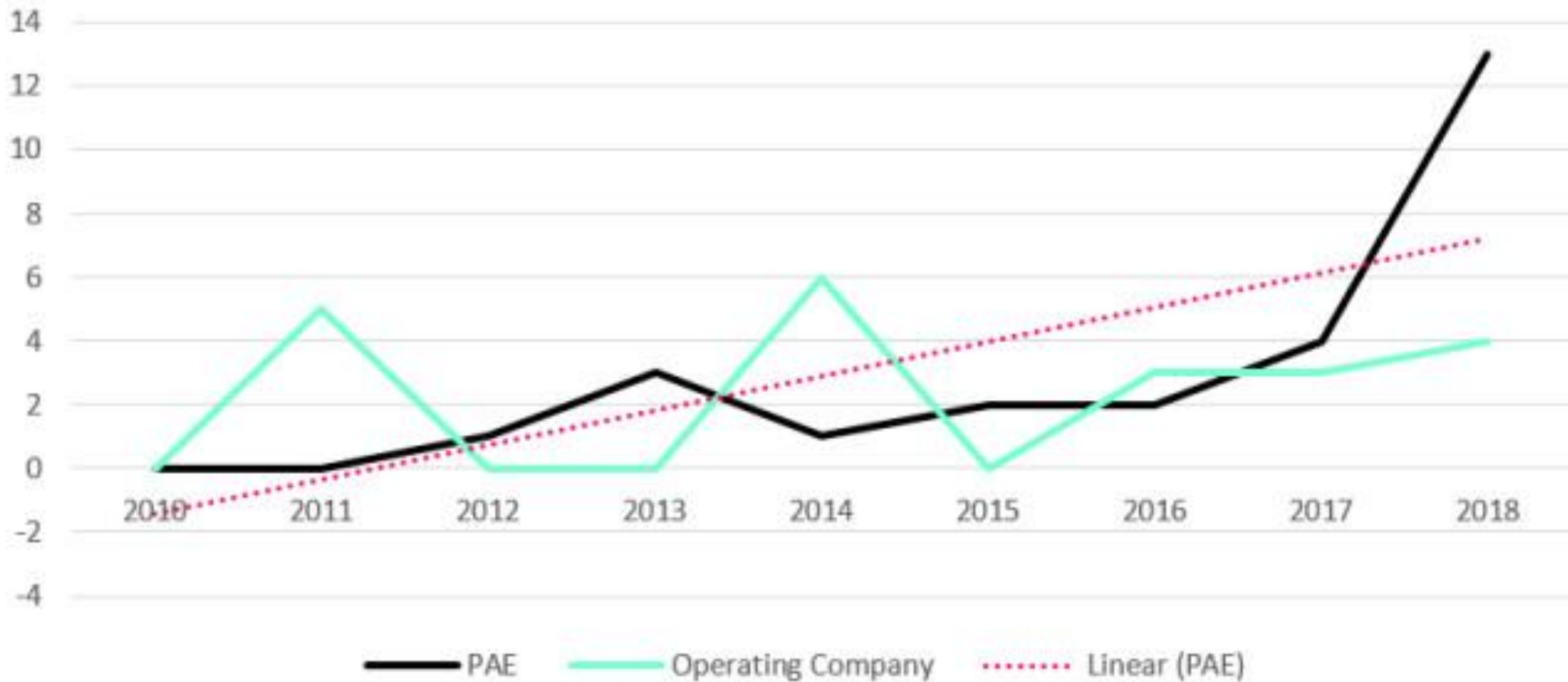
IOT & Patent Filing





Source: [IPlytics GmbH](#)

Number of reassigned IoT patents where the latest assignee was identified as a PAE

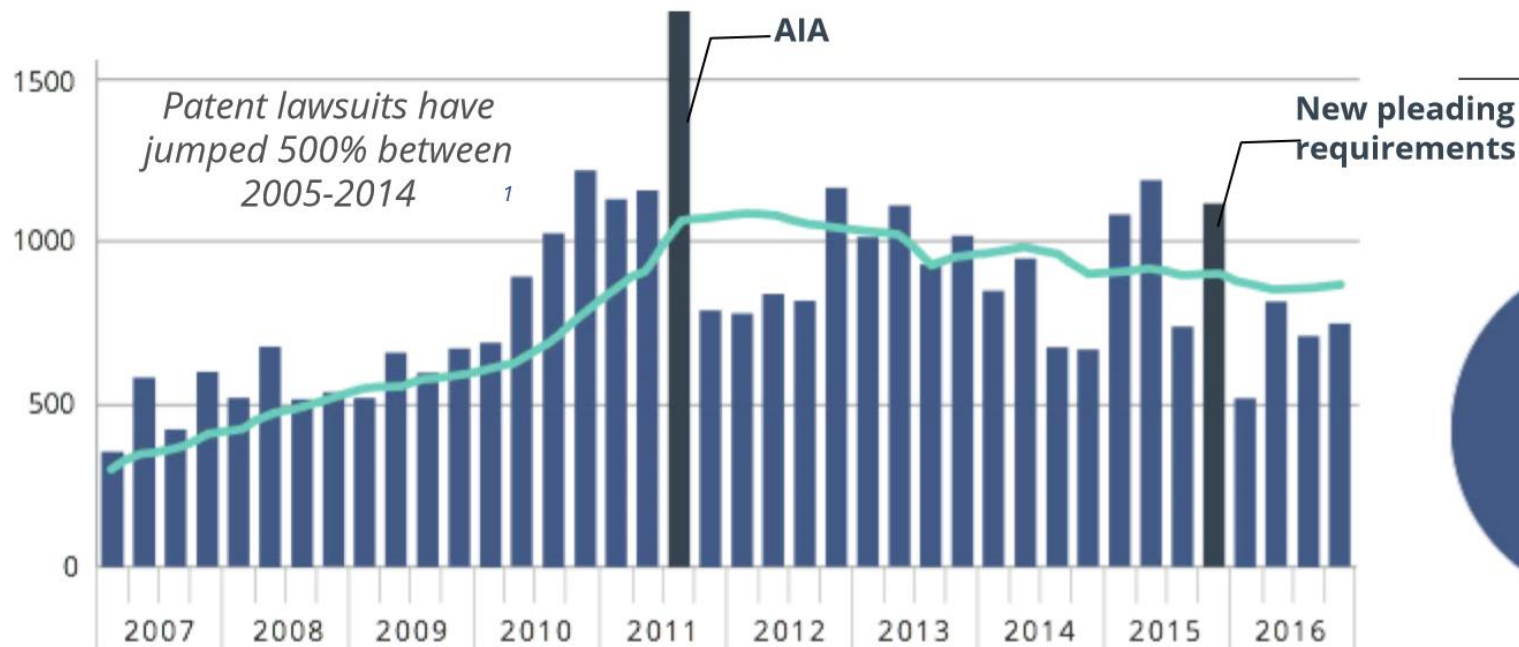


Source: [IPlytics GmbH](#)

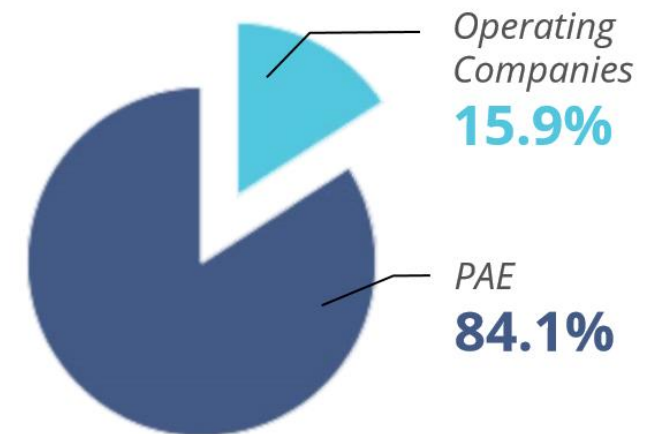
Number of litigated IoT patents as to date of first litigation (United States)

PAEs - hurting innovation

Defendants added to NPE Campaigns Quarterly

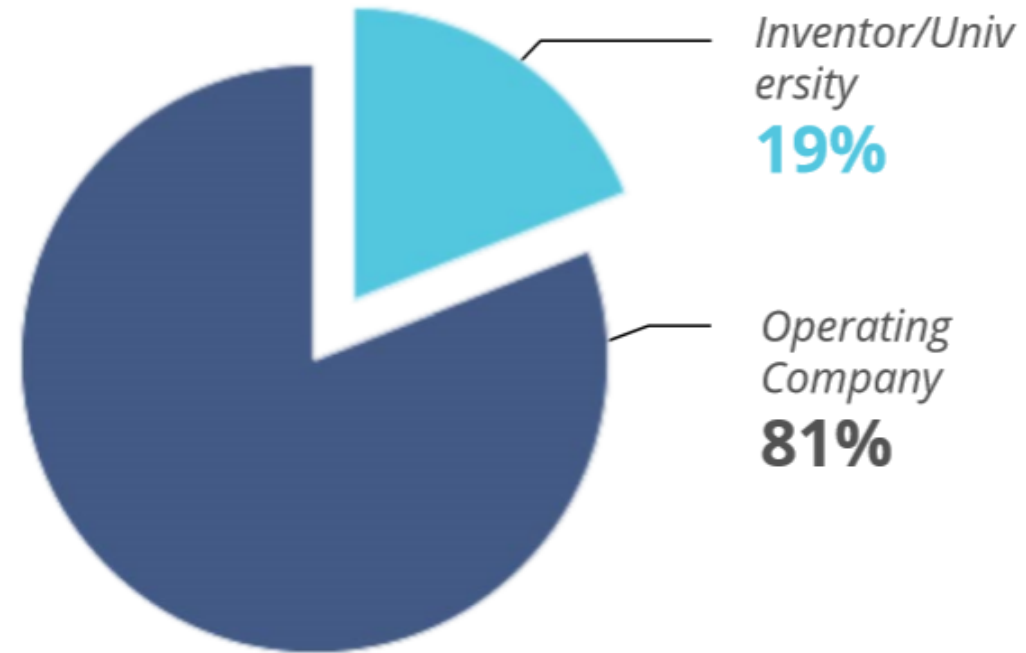


PAEs drain ~\$80B from the US economy per year, or \$1.5B a week¹⁰



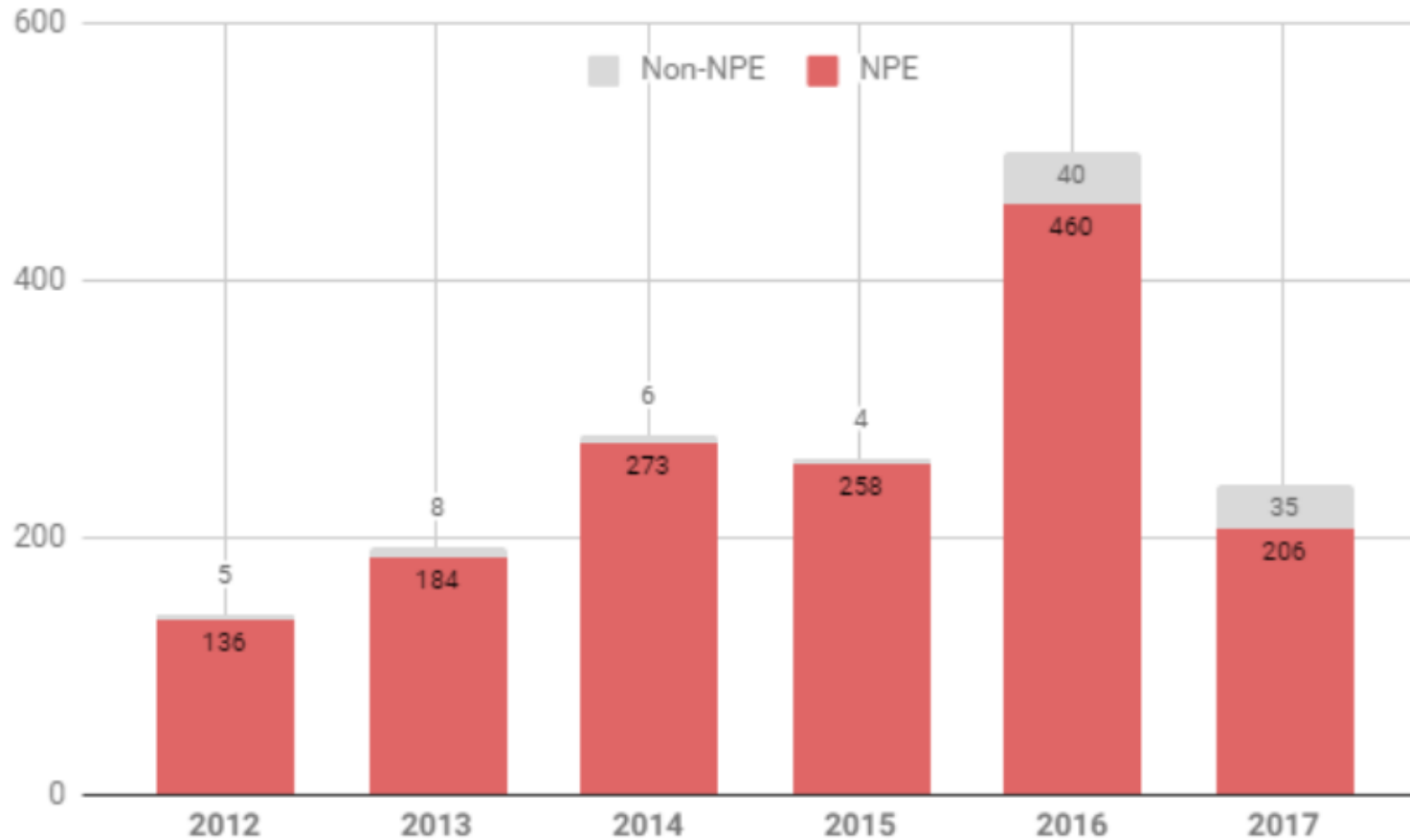
Where are the PAEs getting their patents?

81% of patents acquired
from PAEs come from
companies⁷



Companies provide PAEs with most of the patents

2012-2017: Internet of Things Litigation



**NPEs
continue
to account
for over
85% of all
IoT
litigation.**

Source: **Unified Patents**

What about *small* companies?

- *Startups and small companies are softest targets for trolls*
 - *50% of all companies sued by trolls make less than \$10 million/year*
 - *Over 50% of all patent lawsuits concern software patents[†]*



Source: <http://www.gao.gov/products/GAO-13-465>

Patent Troll Akoloutheo Sues Oracle in Latest Chapter of its Cloud Software and IoT Patent Litigation Campaign

In its latest filing in February 2019, non-practicing entity Akoloutheo, LLC has expanded its Eastern District of Texas patent litigation campaign to include [Oracle](#). Akoloutheo accuses the [Oracle Analytics Cloud](#), [Oracle Exadata](#), and [Oracle Data Visualization](#) technology as infringing on its patent. Formed in January 2018 as a Texas Limited Liability Company, Akoloutheo was assigned the rights to U.S. Patent 7,426,730 (the '730 patent) less than one month later. Akoloutheo wasted no time, beginning its litigation campaign and filing its first patent litigation lawsuit just five days after taking ownership of the '730 patent.

Since February 2018, and prior to filing its latest suit against Oracle, Akoloutheo has filed nine other patent infringement suits asserting the '730 patent. Akoloutheo's targets include major players like [Siemens](#) cloud-based software and PaaS solutions including the [MindSphere](#) cloud-based IoT Operating System, and [Citrix Systems](#) cloud-based software and SaaS solutions for network monitoring and management. Akoloutheo has also sued energy companies alleging infringement of another one of its patents relating to IoT-based technologies, such as CenterPoint Energy and its IoT-Based [Smart Grid](#) and [Smart Meters](#). Each of Akoloutheo's ten suits involving the '730 patent have been filed in the plaintiff-friendly U.S. District Court for the Eastern District of Texas, and have been resolved quickly. Of the nine cases filed before Oracle, seven resulted in voluntary dismissal (likely settlement) after approximately 100 days of minimal litigation activity.

DEFENSIVE PATENT STRATEGY

- License on Transfer (LOT Network)
- Open Invention Network (OIN)



LOT NETWORK - BENEFITS

- Immunized from 1.1 million patents
- Free for companies with upto 25 million annual revenue.
- Opportunity to be equal partner with Industrial Leaders.
- Free Patents on joining.

OPEN INVENTION NETWORK - THE PATENT NON-AGGRESSION COMMUNITY

Overview

MEMBERS

~3000

COMMUNITY MEMBERS
FROM **START-UPS**
TO **LARGE**
CORPORATIONS

CROSS LICENSE POOL

~2.0 million

TOTAL PATENTS AND APPS
OWNED BY OIN LICENSEES

OIN PATENT PORTFOLIO

~1300

GLOBAL PATENTS AND
APPS WITH BROAD SCOPE

~\$100 million
SPENT ACQUIRING DEFENSIVE
PATENTS

LINUX SYSTEM

>2800

OPEN SOURCE **CORE LINUX**
TECHNOLOGY PACKAGES

COVERED



The **Linux System** definition comprises core software packages from various open source projects which, taken together, provide the scope of the cross-license obligation to which each community member commits.

Open Invention Network Benefits

What do we do?

- ❖ Deliver royalty-free access to the **Linux System** patents of our 2900 members via cross licensing commitments.
- ❖ Manage over 1300 OIN patents, licensed free of charge to all of our members.
- ❖ Leverage our relationships to collect and share prior art when needed.
- ❖ Challenge potential patent applications if appropriate.
- ❖ Provide collective intelligence from a global community.
- ❖ Support our members and those under attack from patent aggressors.

THE PATENT NON-AGGRESSION COMMUNITY

The Linux Foundation & Project-based Innovation



THE PATENT NON-AGGRESSION COMMUNITY

Member Representation Sampling

NETWORK/
TELECOM  AT&T    verizon[✓]  vodafone

INTERNET  Dropbox facebook  JD.京东.com  YAHOO!

SOFTWARE  Alibaba Group 阿里巴巴集团  Microsoft  salesforce  SAP YOKOGAWA 

NETWORKING  CISCO  JUNIPER NETWORKS  Mellanox TECHNOLOGIES NETGEAR  SERCOM

AUTOMOTIVE  DAIMLER  Ford  吉利汽车 GEELY AUTO  GM  HONDA  HYUNDAI
 KIA  mazda  TOYOTA  VOLVO

THE PATENT NON-AGGRESSION COMMUNITY

Member Representation Sampling

HARDWARE



SEMI- CONDUCTOR



FINTECH



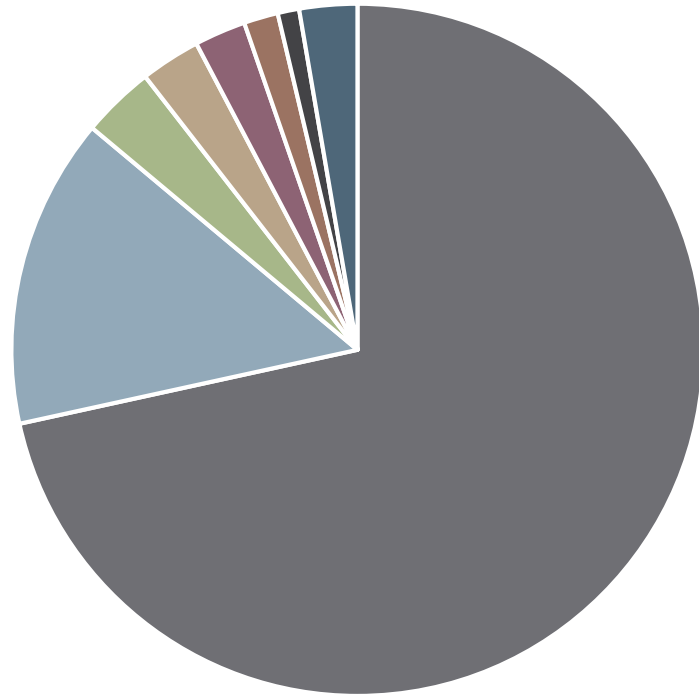
INDUSTRIALS



ENERGY



Linux System Overview



■ Common Base Packages ■ Software Engineering ■ Enterprise Computing
■ Mobile ■ Networking & Security ■ Cloud Computing
■ Web ■ Others

Common Base Packages (71.5%) - Linux kernel, system programs, common libraries

Software Engineering (14.5%) - Perl, Python, Go, Lua, etc.

Enterprise Computing (3.4%) - JBOSS, Jakarta, OpenShift (high-functionality packages)

Mobile (2.8%) - Android, Web OS

Networking & Security (2.4%) - OpenSSL, OpenSSH, OpenVPN

Cloud Computing (1.6%) - OpenStack, Qemu, libvirt

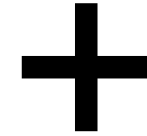
Web (1.0%) - Apache web server, NGINX

Others (2.7%) - Container Technologies, Configuration Management, Automotive, Software Development

IoT, ONAP/OPNFV & Hyperledger - Future roadmap of Linux and LF Projects will translate into near term incorporation but given the reuse of code all of these projects are to some degree already represented in the Linux System

Patent Freedom for Open Source Software Projects

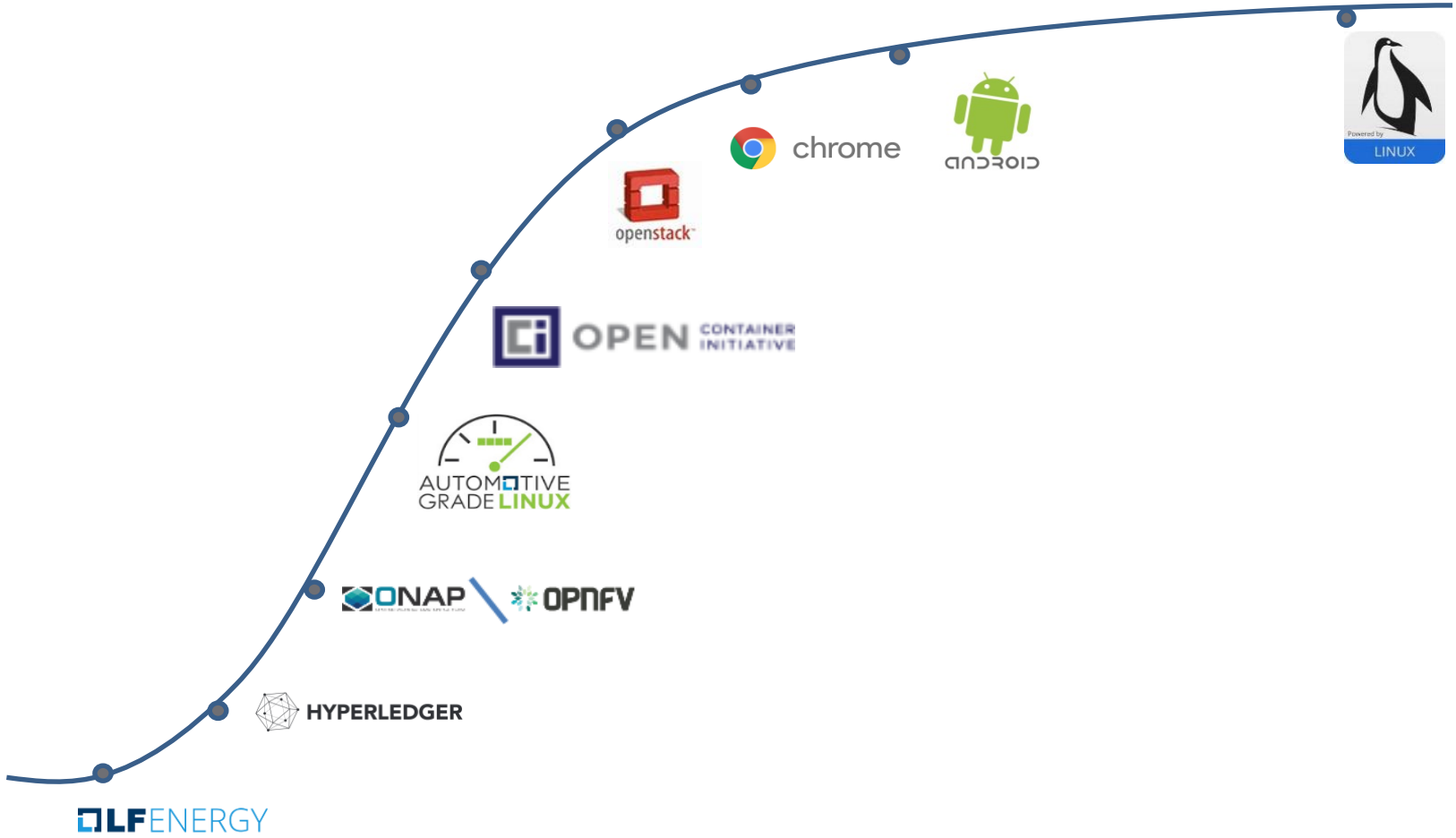
Technical Development &
Collaboration Occur in
Parallel with Legal Collaboration



open**invention***network*[®]

open**invention***network*[®]

Strategic Guardian Role: Licensing into Key Linux / OSS Projects & Tracking Growth



Joining Open Invention Network

How can you participate?

- ❖ Everyone can join; Everyone signs the same terms
- ❖ No barrier to entry; No requirement to hold patents
- ❖ **Zero** cost for membership
- ❖ No ongoing time commitment
- ❖ Everyone makes the same cross-license commitment in the [Linux System](#), as defined on our website
- ❖ Members and licensees are listed on our website
- ❖ Join now through our electronic signature process online

Our Role Beyond the License

How Do We Help Our Community Members Against Patent Aggressors?

- ❖ We **collect and share prior art** to help community members defend themselves.
- ❖ We **sell patents** to OIN community members for defensive purposes.
- ❖ We **acquire patents from patent antagonists** asserting Linux-centric patents when this clears patent threats broadly for the OIN community.
- ❖ We routinely utilize the AIA's pre-issuance submission program to **limit claim scope of overly broad patent claims** in key technology areas.

Sample Community Benefits

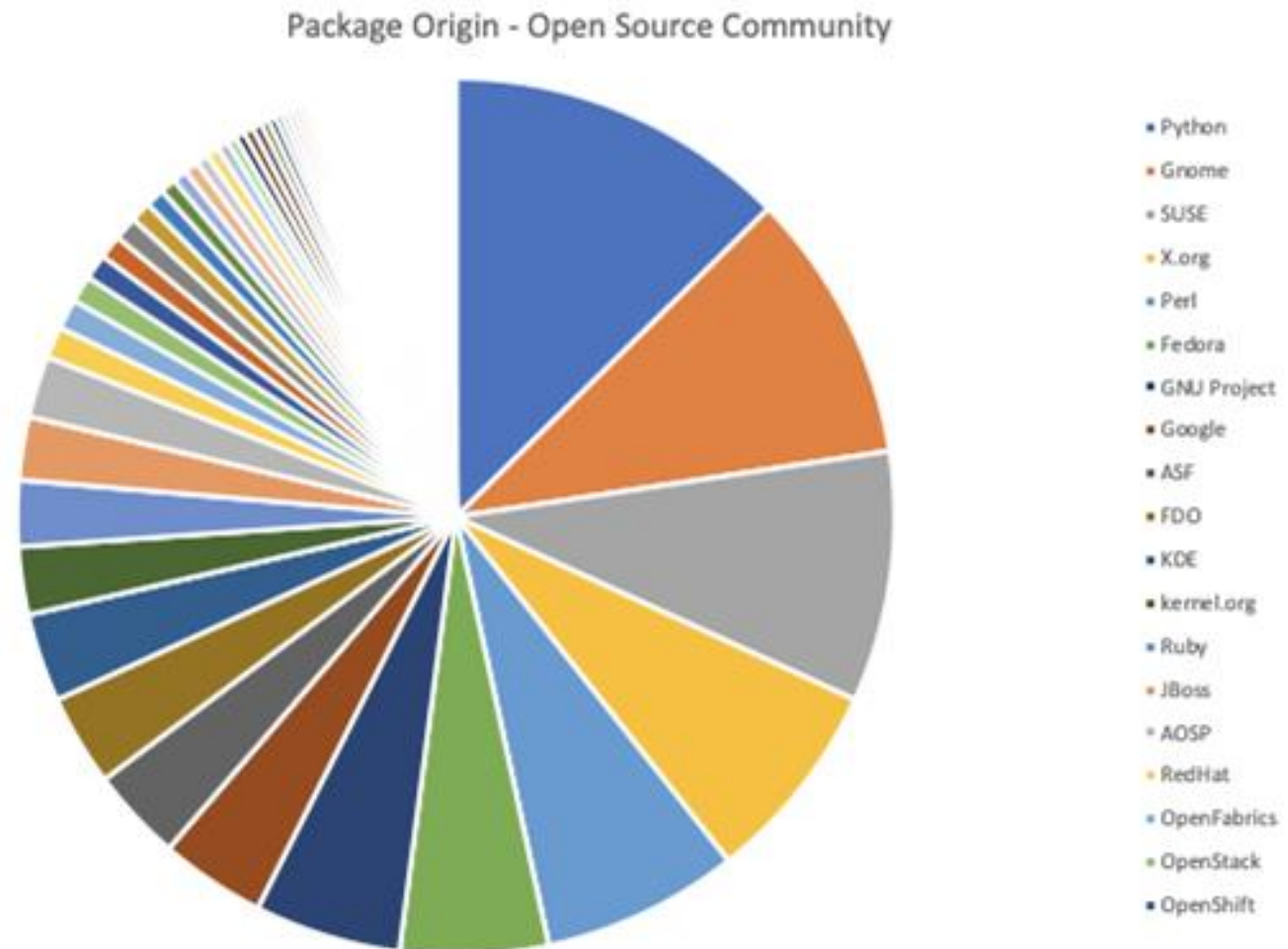
- ❖ **Threat Clearing:** We acquired 22 patents that were being marketed for sale as reading on “Open Source Software”, thereby clearing this patent threat for its community.
- ❖ **Patent Sales:** A community member was asserted against by a Fortune 50 company, acquired patents from us and used our patents to negotiate a far better deal than originally demanded.
- ❖ **Membership Alone as a Deterrent:** Facing a major lawsuit from a Fortune 50 company, another entity decided to join our community. After its membership became known, a settlement was reached within 72 hours on terms that were extremely favorable for them.

Sample Community Benefits

- ❖ **Prior Art Assistance:** In over 45 cases where one of our members was the subject of claims, we had identified and shared prior art for use against the NPE, or corporate patent aggressors.
- ❖ **Patent Acquisitions:** We have expended in excess of \$15M to purchase Linux-centric patents owned by NPE's that were being used in active assertions or litigation - 15% of ours circa \$100M total patent acquisition investment to date.
- ❖ **Claim Scope Reduction:** We are among the leading users of the AIA's pre-issuance submission program, having helped to get more than 25 overly broad patent applications rejected and significantly reducing claim scope in another 40 plus patent applications.

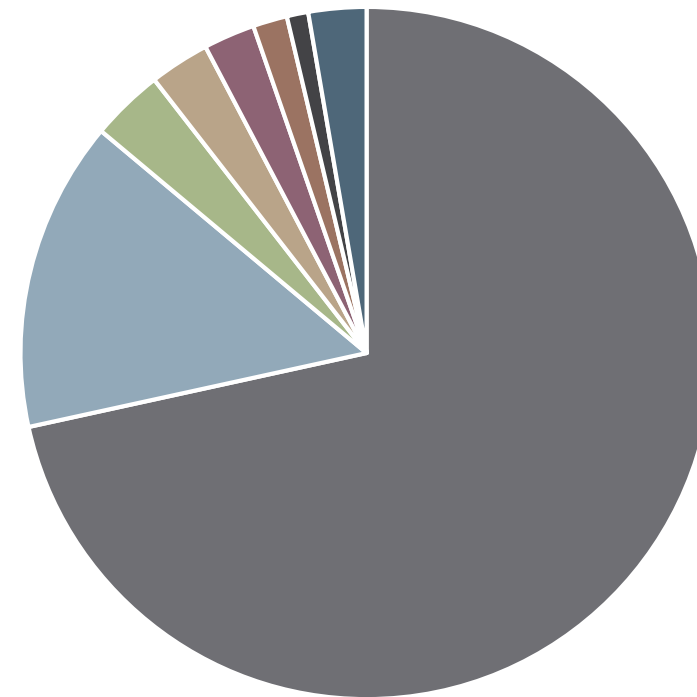
The Linux System: Understanding the Scope of Our Cross-License

- ❖ The Linux System definition contains packages from a broad variety of organizations and groups representing a large share of the body of existing, de-facto standard open source projects.



The Linux System: Understanding the Scope of Our Cross-License

- ❖ Almost all packages are basic platform-independent functions of modern computer systems, and are used in a wide variety of devices.
- ❖ Covers the essential building blocks of today's Linux systems, from embedded computers to mobile phones to cars.



■ Common Base Packages ■ Software Engineering ■ Enterprise Computing
■ Mobile ■ Networking & Security ■ Cloud Computing
■ Web ■ Others



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