



FRAND LICENSING

STANDARDISATION



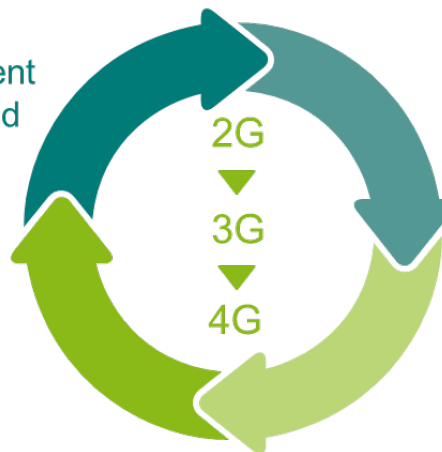
› Specific context of standardisation in mobile telecom industry

- Use of patents
- Open, inclusive & dynamic ecosystem
- FRAND & licensing dynamic

Open standards create an environment in which 2G, 3G and 4G wireless technologies can thrive.

Early investment
in research and
development

Fair and
reasonable
licensing for
new entrants



Creation of industry
open standards

Selection of the
best solution based
on general consensus

4G - A HUGE EFFORT



FACTS:

Work Groups attended by all major vendors meet 4 - 8 times a year;

Thousands of technical submissions to each group every year;

WG RAN1 Meeting #78 in August 2014 was attended by more than 300 delegates;

Proposals are approved based on their technical merits.

TSG GERAN
GSM EDGE
Radio Access Network

GERAN WG1
Radio Aspects

GERAN WG2
Protocol Aspects

GERAN WG3
Terminal Testing

TSG RAN
Radio Access Network

RAN1: Radio Layer 1

RAN2: Layer 2 & 3

RAN3: RAN interfaces

RAN4: Performance

RAN5: Testing

TSG SA
Service & System
Aspects

SA1: Services

SA2: Architecture

SA3: Security

SA4: Codecs

SA5: Management

TSG CT
Core Networks and
Terminals

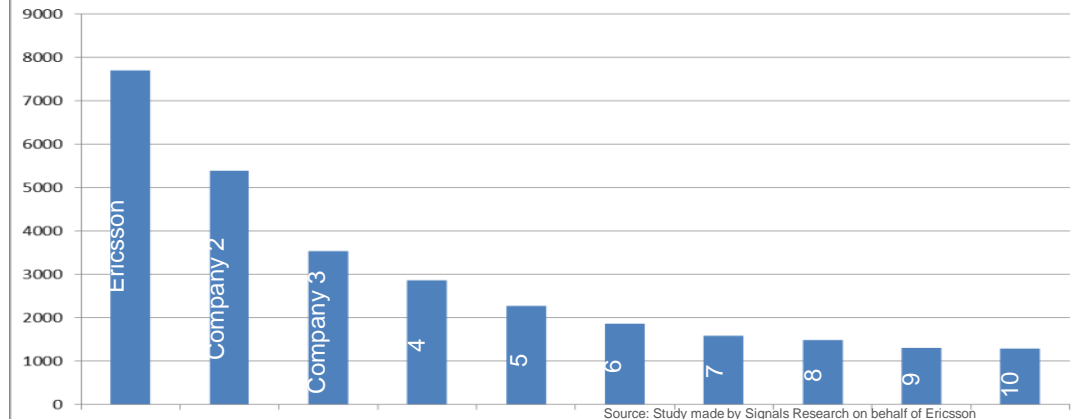
CT1: Mobility/Call-Ctrl.

CT3: External nw i/w.

CT4: Core nw.

CT6: SIM/USIM.

Approved contributions 1999 - 2014
(RAN1, RAN2, CT1, SA2, SA3)



OUR INVESTMENT



Over the years, Ericsson has invested heavily in research and development. IPR licensing revenues are reinvested back into research.

In 2015, Ericsson invested SEK 34.8 billion in R&D

- › By receiving a fair return on our [R&D investment](#), we create a self-perpetuating cycle which allows us to continually innovate and invest in new research
- › This will help to ensure investments in telecom standards evolve to meet the needs of the next generation of mobile users

RESEARCH AND DEVELOPMENT

		2013	2014	2015
Expenses (SEK billion)		32.2	36.3	34.8
As percentage of net sales	14.2%	15.9%	14.1%	
Employees within R&D as of December 31*	25,300	25,700	23,700	
Patents*		35,000	37,000	39,000

*The number of employees and patents are approximate

Continual investment in standards increases performance

VALUE CREATION



-99%

Decrease in average mobile subscriber cost per megabyte
between 2005 and 2014

Increase of 4G data-transmission speeds
compared to 2G networks

× 12,000

-95%

Cost reduction of network
infrastructure

EARLY "SMARTPHONES"



VisorPhone



FRAND EXPLAINED



FRAND has a proven track record of global market success. It provides an incentive for further innovation, and makes it possible for new companies to enter the market.

- › A FRAND commitment means:
 - Standard essential patents are licensed on fair, reasonable and non-discriminatory terms
 - The telecoms standard is not blocked, therefore vendors can invest in infrastructure and device businesses
 - Technology transfer is possible through reasonable cumulative royalty



FAIR COMPENSATION



NO
MONOPOLY

PATENT BY PATENT OR PORTFOLIO OFFER?



- › “If the patentee has already granted licenses to the SEP offered or the SEP portfolio offered for similar products, this suggests that this collection of protective rights is equitable and therefore also **to be accepted by patent users.**” Portfolio = “**well-established licensing practice**”
- › “For the question of whether a – possibly global – portfolio license complies with FRAND requirements, **the industry practice** is particularly relevant.”
- › the patentee has a **legitimate interest** to settle all acts of use of a corporation by a single license agreement, rather than having to take action under individual property rights, or in individual countries, in order to bring about a corresponding license agreement.”
- › “Patent by patent: questionable from the viewpoint of **non-discrimination.**”



Extracts from Saint Lawrence vs. Vodafone District Court Düsseldorf 4a O 73/14, 31 March 2016

The quotations on the St Lawrence case are taken from the translation offered by the Arnold Ruess law firm