Introduction to IP for ICT start-ups TETRA Webinar #18

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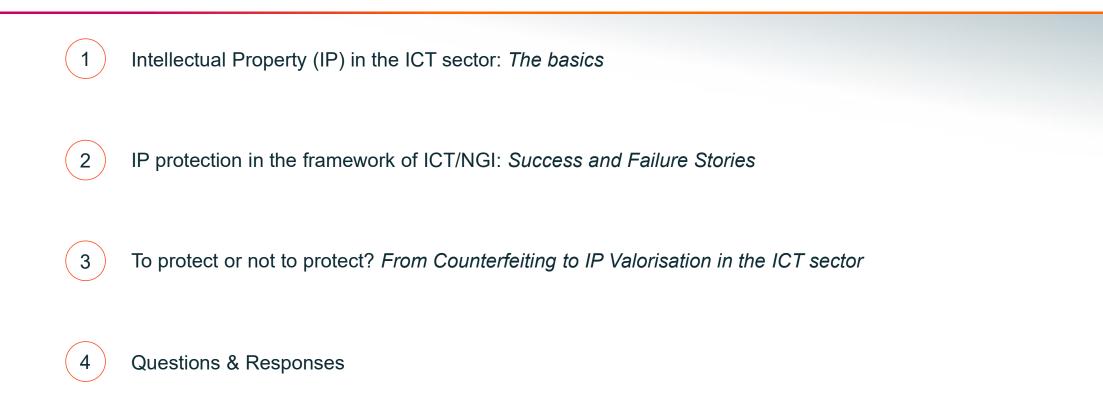
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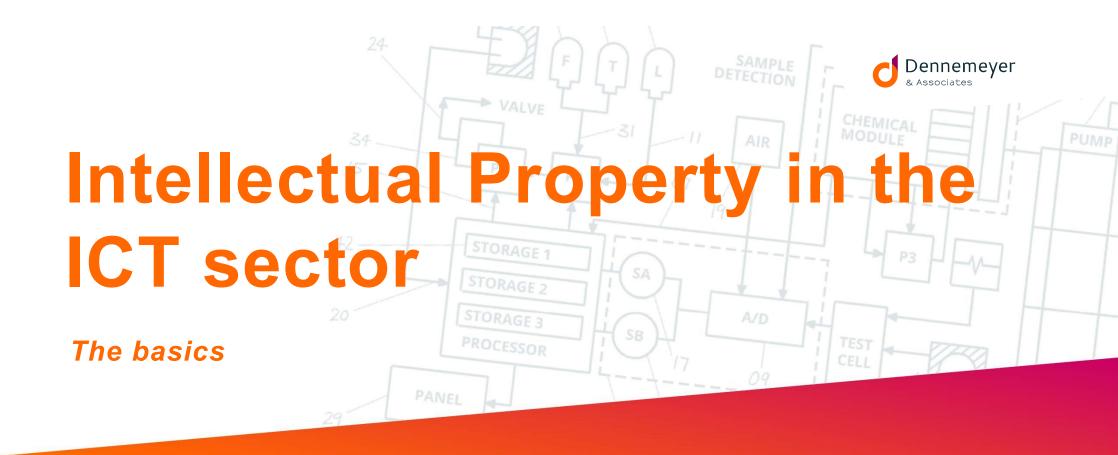
May 26, 2021

Agenda









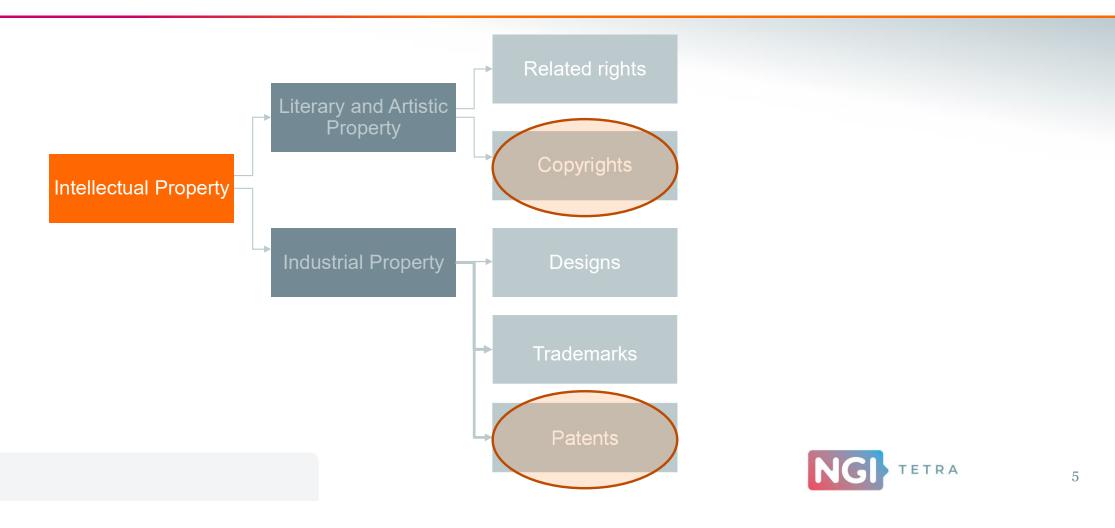


1.1 The basics



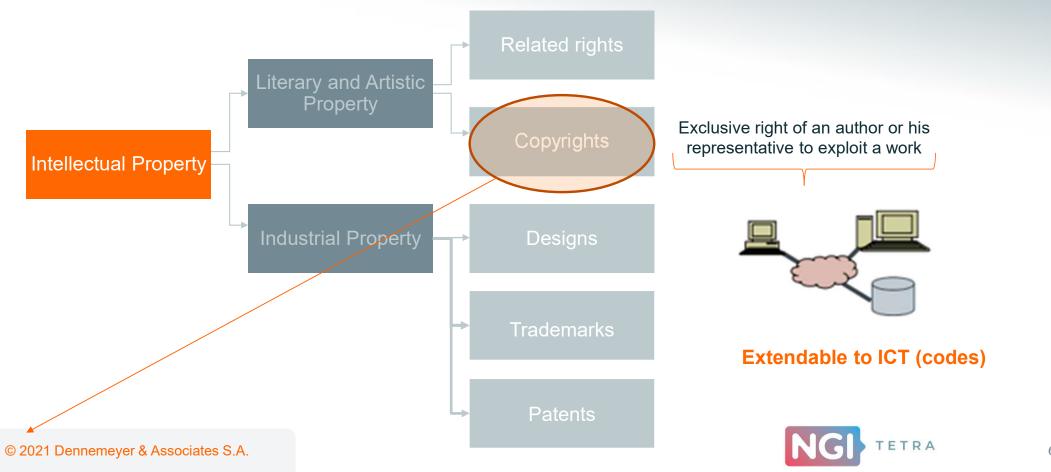


1.1 The basics





1.1 The basics



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1. Intellectual Property (IP) in the ICT sector

1.2 Copyrights

Definition and contextual elements for "software" copyrights

- <u>Copyrights</u> do not protect the substance but the form !
 - > Protection of the "source code" + "compiled code"
 - Protection of the "preparatory design materials" (incl. user manual, flowcharts)

(All protected objects must be an original and unique intellectual creation of its author)





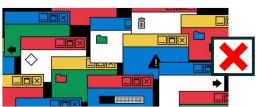
1.2 Copyrights

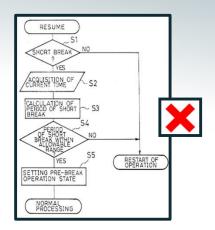
Definition and contextual elements for "software" copyrights

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(All protected objects must be an original and unique intellectual creation of its author)

- \rightarrow NO protection of the algorithm functions
- \land > NO protection of the technical specifications or documentation
 - \rightarrow NO protection of the GUI's









1.2 Copyrights

What "software" copyrights entail

- Protection against •
 - > reproduction (permanent <u>or</u> temporary).
 - > translating, adapting, rearranging ... the computer program.
 - > Distributing (including rental or copying).
- Duration: 70 years (post-mortem) ٠



of April 18, 2001)









1.2 Copyrights

Enforcing "software" copyrights

- Only prerequisite: proving the existence of the software copyright by any means
 - > Submitting the code to a dedicated national association (APP in France)
 - > Deed of ownership approved by a notary
 - > Filing to a digital system ("enveloppe Soleau" in France, i-DEPOT tool in Benelux).







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- Infringing any of the aforementioned prerogatives is a counterfeiting act

 punishable under civil and criminal law
 - > Civil penalties : compensation for damages.
 - Criminal sanctions: 300 k€ fine, 3 yrs imprisonment (500 k€/5 yrs imprisonment if organized crime).
 - > Publication of the judgment

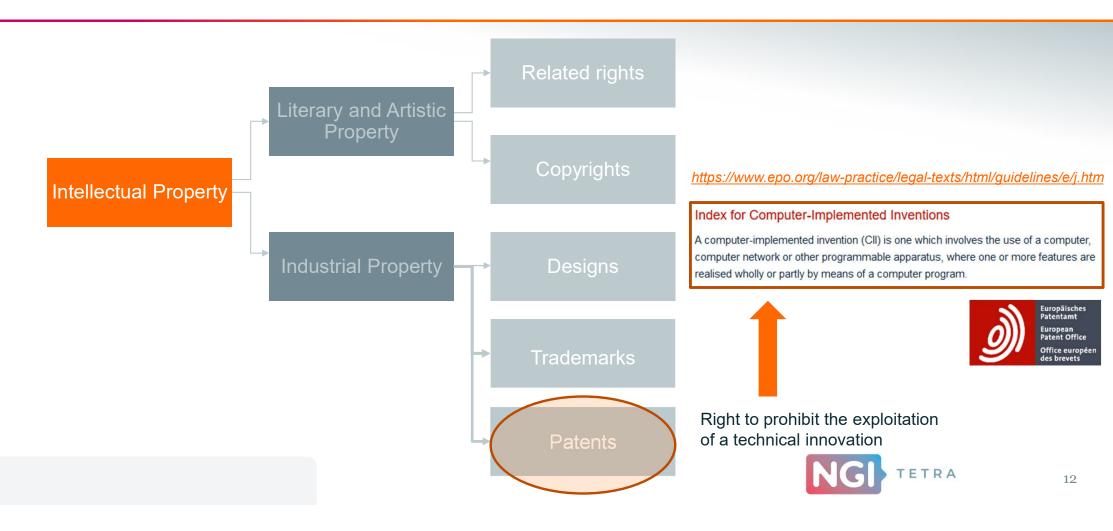




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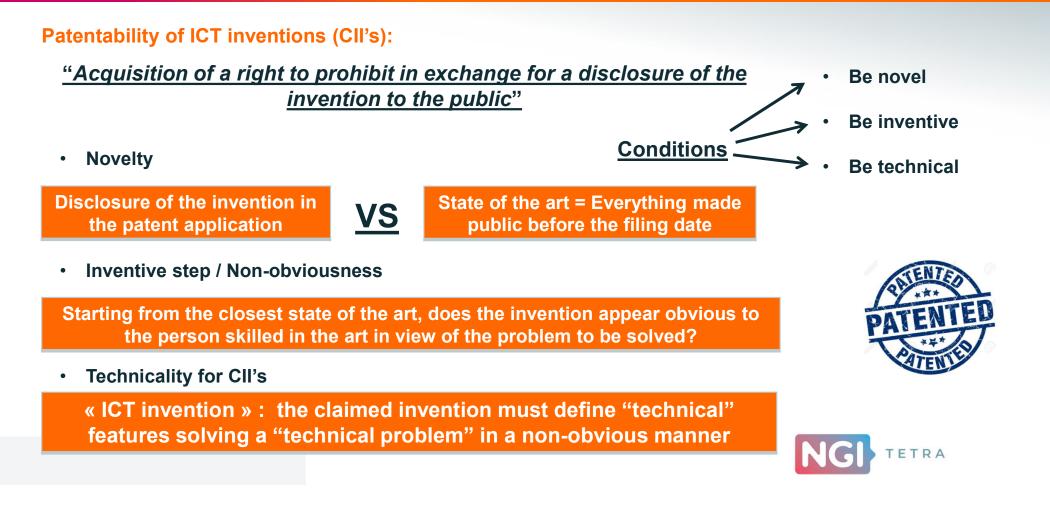
1. Intellectual Property (IP) in the ICT sector

1.3 Patents





1.3 Patents

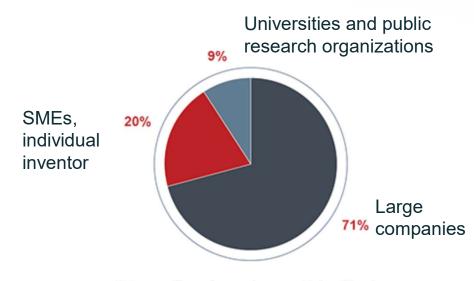




1.3 Patents



>> 175 000 European patent applications filed in 2018



>> 1 European application above 5 is filed by a SME



1.4 Summary

ICT inventions: comparison between copyright and patent

Software copyright

- Proof of ownership/originality difficult abroad
- Scope of protection limited to the software embodiment
- Very low cost
- Very long term (70 years after the author's death)
- Effective mostly against slavish copying/imitation

- Patent Patent
 - Proof of ownership/novelty is simple
 - Scope of protection may be very broad (not limited to a single embodiment)
 - Fairly high cost
 - Duration limited to 20 years from filing
 - Effective against any act of manufacturing, offering, commercializing, using, importing or exporting the corresponding product or process.



IP protection in the framework of ICT/NGI Success and Failure Stories

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2. IP protection in the framework of ICT/NGI

Success and Failure Stories

Approach : examples of startups which meet the following criteria

- Directly involved in the field of ICT
- Having (had) an IP portfolio that played a major role in their success or in their failure
- Ex post analysis using reliable and verified sources





Success and Failure Stories

Approach : examples of startups which meet the following criteria

- Directly involved in the field of ICT
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2. IP protection in the framework of ICT/NGI

2.1 Webdyn: "integrated ICT solutions for the Internet of Things"

The company



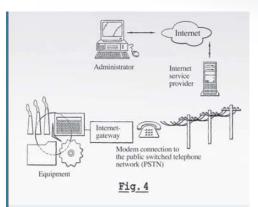
- French SME based in Paris since 1997
- Turnover: EUR 4 million
- Staff: 30 people
- 1 Export office in India
- Core business: hardware + software components for complex networks, especially in the solar energy area, and implement the Internet of Things (IoT) to manage their smart energy systems.

The technology

- IP gateways (used to connect wide area networks to local area networks)
- End points such as ICT concentrators (used to collect local sensor-generated data from local area networks)
- Complete ICT systems for data collection (aggregate the data and send them through wide area communication networks), management and control.

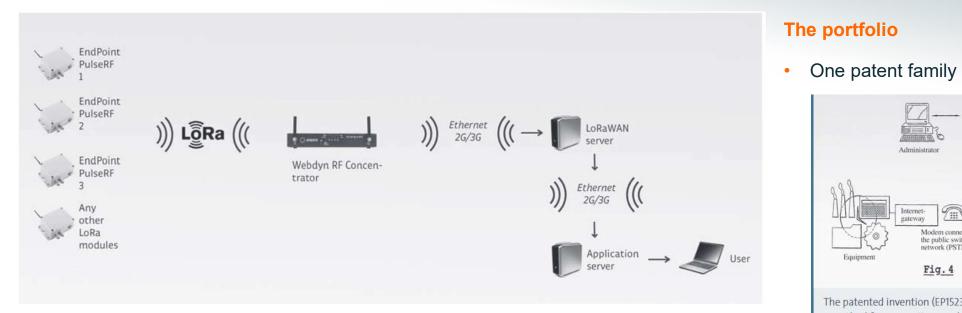
The portfolio

• One patent family (EP1523832)



The patented invention (EP1523832) relates to a method for connecting an electronic system to a communications network through an access provider, such as the internet, and a device, a gateway, for carrying out the method. Gateways act as a communication link to the data generated in electronic equipment and one (or more) computer platform that operates the data received from equipment. With such architecture it is possible to manage remote, electronic equipment using standard IT tools (TCP/IP tools).

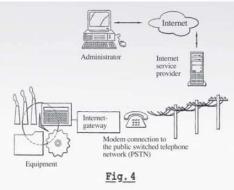
2.1 Webdyn: "integrated ICT solutions for the Internet of Things"



"WebdynRF LoRaWAN is a platform dedicated to wireless networks using the LoRa radio technology. It is designed to link counters, sensors and a data server via the LoRaWAN network."

Source: https://www.epo.org/learning/materials/sme/sme-case-studies.html

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2. IP protection in the framework of ICT/NGI

2.1 Webdyn: "integrated ICT solutions for the Internet of Things"

The strategy

- Webdyn created a leadership position thanks to a single European patent that was obtained via the international (PCT) route prior to the market boom.
- Patent EP1523832 broadly protects a method allowing an administrator to inspect the client's systems remotely and to provide whatever intervention is required.
- EP1523832 provided an exclusion right and helped securing Freedom To Operate (FTO)
- Webdyn used the patent to negotiate a licensing agreement with a competitor before grant.
- Broad range of products: WebdynSunPM, WebdynTI, WebdynSun, Modbus, WebdynPulse, WebdynBridge gateways, WebdynEasy W M-Bus 868MHz sensor, radio concentrators, etc.



2. IP protection in the framework of ICT/NGI

2.1 Webdyn: "integrated ICT solutions for the Internet of Things"

Take-away conclusions

- Early patent application is a clear key to growth for ICT companies, especially when involving hardware.
- A strong patent application is a powerful tool for negotiating cross-licensing and/or securing FTO
- As long as a filed patent is not granted, its business value remains significant as providing potential infringers with a signal that they might be liable for damages, seizure and injunction once the patent is granted.
- ➔ Patent protection is not a "necessary and sufficient" condition to success, but its use is most certainly!





2.2 AltoBridge: "GSM (2G) and 3G wireless broadband solutions to unconnected communities"

The company



- SME founded in Ireland in 2002
- (Had) turnover of EUR 13.2 million in 2011
- Staff: 130 people over IE, MY, US and CN
- Core business: world's first commercial on-board GSM service for aircrafts, for deep-sea vessels and first-time mobile connectivity to remote communities in South East Asia, Oceania and Africa.

The technology

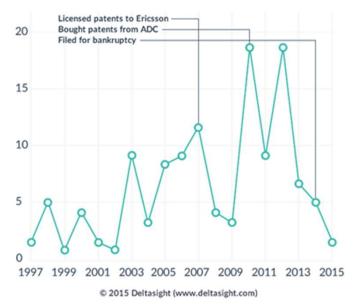
- All-in-one wireless (mobile) systems including transmitters, receivers, servers and general 2G/3G wireless broadband solutions
- Low transmission bandwidth (4 kbps per call)
- Low power consumption (2 x 10W RF output power, enabling solar-power-only sites)

The portfolio

> 120 published patent families

ACTIVITY OVER TIME

BY NUMBER OF PUBLICATIONS





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- Core business: world's first commercial on-board GSM service for aircrafts, for deep-sea vessels and first-time mobile connectivity to remote communities in South East Asia, Oceania and Africa.
- Bankruptcy in June 2014, sold for EUR
 <u>4 million to iDirect (ST Engineering)</u>

The technology

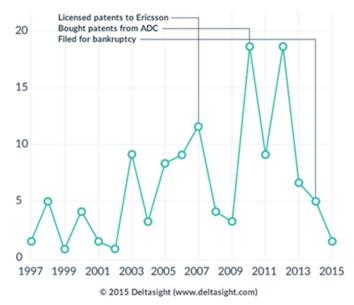
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2.2 AltoBridge: "GSM (2G) and 3G wireless broadband solutions to unconnected communities"

Success was expected thanks to ...

- Early patent applications, significant R&D investments, impressive geographical coverage, number of citations and awards from 2010 and on.
- A strong patent portfolio with license/selling agreements (Ericsonn, ADC)

... but not provided because of:

- Competition having struck deals with several national communications providers, AltoBridge's competitors priced them out of the market (2011).
- Lack of action being faced with competitors, AltoBridge failed to leverage (file infringement lawsuits) or monetize its patent portfolio at the right time.
- → iDirect eventually acquired AltoBridge for 4 M€ in 2014 whereas IPEG estimated the IP assets to be more than several times this value in 2011.

Source: Intellectual Property Expert Group

TOP CITING COMPANIES

WITH NUMBER OF ALTOBRIDGE FAMILIES CITED

ADC Telecommunications	Families cited
of Motorola	Families cited $\bullet \bullet \bullet \bullet \circ \circ$
Siemens	Families cited ••••••
💮 Ericsson	Families cited •••••••
💮 Huawei	Families cited ••••••••
💮 Lemko Corp	Families cited • • • • • • • • •
Oualcomm	Families cited ••••••••
🐨 Samsung	Families cited ••••••••
Cisco	Families cited •••••••
🐨 Intel	Families cited •••••••
TTE Corp	Families cited •••••••

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2.2 AltoBridge: "GSM (2G) and 3G wireless broadband solutions to unconnected communities"

Take-away conclusions

- Maintaining IP rights alive becomes expensive in the long-term: a well-defined strategy is essential
- Valuing and monetising one's patent portfolio is of uttermost importance when facing financial/market challenges
- Patents are not mere (intelligible) assets but <u>rights to prohibit</u> manufacturing, supplying, offering, using, importing and/or exporting on the territories of interest.
- → Patent protection's main interest is to slow down competitors and stop infringers, and not only to contribute to the company's monetary value.



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2. IP protection in the framework of ICT/NGI

2.3 Life360: Family Locator GPS Tracker for Safety

The company



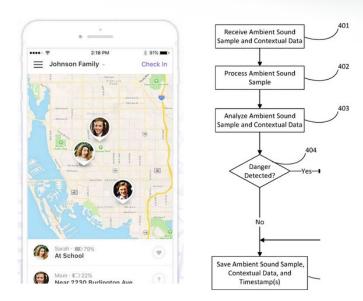
- Start-up founded in San Francisco in 2008
- Revenues of USD 59 millions in 2019
- Staff: 220 people in SF
- Core business: family social networking application (Android, iOS, Windows) for a location-based service designed primarily to enable friends and family members to share their location with each other.

The technology

- GPS-based location technology with a messaging platform.
- Combination of Wi-Fi signals, cell tower signals and geofences for avoiding GPS battery consumption.
- Use of contextual data (e.g. recorded sounds, local crime rate data, speed, ...) to manage the battery levels and outlying actions.

The portfolio

> 10 granted US/EP patent families

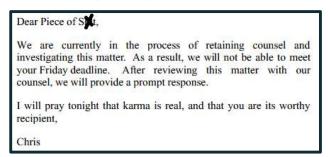




2.3 Life360: Family Locator GPS Tracker for Safety

The story

- Early May 2014: \$50 million raised by Life360 + strategic partnership obtained with ADT Security Systems
- <u>May 13, 2014</u>: Life360 receives a letter by Advanced Ground Information Systems Inc. (AGIS) informing them of the alleged infringement of its US Patents and inviting them to discuss a patent licensing arrangement.
- May 14, 2014: response from Life360 →



May 16, 2014: lawsuit filed by AGIS against Life360 base on US 7,764,954, 8,126,441, 7,672,681, 7,031,728

- \rightarrow Life360 refuses to settle and demands a jury trial to settle the claim.
- <u>March 13, 2015</u>: "victory" of Life360 by receiving a favorable verdict by a jury which found no infringement of any of the patents ("victory" -> ife360's legal fees reached \$1 million, AGIS' legal fees totaling \$684,190)





2. IP protection in the framework of ICT/NGI

2.3 Life360: Family Locator GPS Tracker for Safety

Take-away conclusions

- Patent protection through grant does not imply freedom to operate!
- Always ask for legal counsel when receiving letters from competitors
- Avoid entering the US market without an IP portfolio (high risk of patent trolling)
- Although patents-in-suit may eventually be ruled as invalid for patentability or definiteness reasons, infringement lawsuits are usually long, costly and unpredictable.





2.4 Seaters: Redistribution software for online tickets to an event

The company

- Belgian start-up founded in 2013
- Yearly earnings above EUR 2 millions since 2015
- Staff: 10 people and offices in New-York, Brussels, Paris & London
- Core business: fill unsold seats at large-scale events, in particular
 →Sell the 5-40% of seats on average left vacant at any event
 - → 20% of the fees go to Seaters for any seats sold

The technology

- Online platform allowing users to apply/queue online for seats that become available later at a given event.
- Data collection method (telephone number, address, etc.) from members registered with a sponsor of said event, said data being associated with an interest level to attend the event by registration on a WishList.
- Interface for accessing the collected data at any time from a by the user and the sponsor.

The portfolio

• A single patent family (BE+US)





TETRA



User Device

<u>102n</u>

2. IP protection in the framework of ICT/NGI

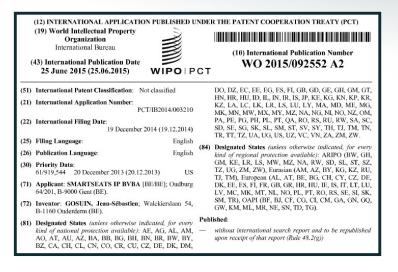
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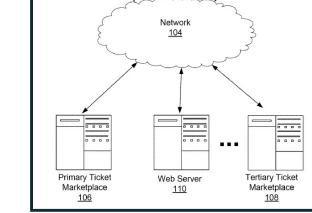
2.4 Seaters: Redistribution software for online tickets to an event

The patent application

R1. A **method** comprising: -determining, from a **rights database** that a first right is allocated to a first party; -receiving a request by a server from a client device controlled by a second party; -calculating, by the server, a probability that the request will be satisfied;

-providing, to the client device, an indicator of the calculated probability; and -recording the request in a database.





User Device

102b

- R18. **A system** comprising: -a computer processor for network communication;
- -one or more memory elements;
- -a computer-accessible memory



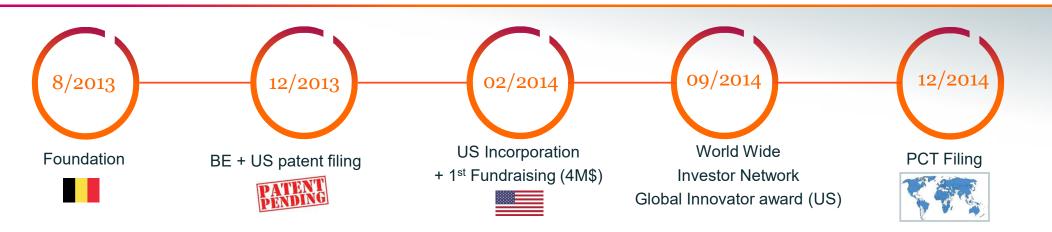
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User Device

102a

2. IP protection in the framework of ICT/NGI

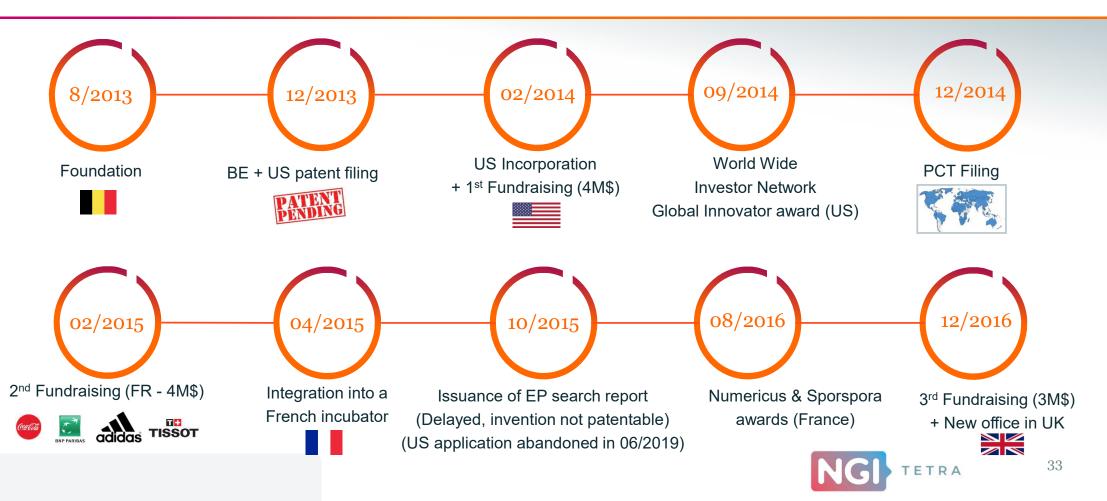
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2. IP protection in the framework of ICT/NGI

2.4 Seaters: Redistribution software for online tickets to an event





2.4 Seaters: Redistribution software for online tickets to an event



"An online, scalable Brand Relationship Management that will transform your business in the digital era."



Seaters has been chosen by the Belgian authorities to develop QVAX. QVAX is the reserve list for scheduled COVID-19 vaccines that could not be administered at the vaccination centers.

The system maximizes use and avoids waste of valuable vaccines (increased efficiency), allowing society to reach the target vaccination coverage more quickly, resulting in herd immunity.

QVAX is the government's official reserve list and follows the distribution priorities of the vaccination strategy, ensuring that reserved vaccines reach the right people.

www.QVAX.org



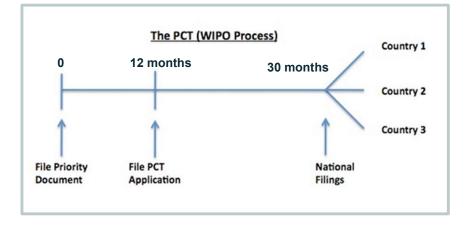


2. IP protection in the framework of ICT/NGI

2.4 Seaters: Redistribution software for online tickets to an event

Take-away conclusions

- Necessity of the first filing to establish a date (preserve the novelty), obtain funding and gain credibility.
- PCT filing within 12 months of the first filing allows postponing costs and getting more time to gain value.
- Even if not granted, a well-exploited patent application attracts investors (especially for ICT methods).
- → Adapting the IP strategy to the marketing strategy is crucial for successful international development.





To protect or not to protect?

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3. To protect or not to protect?

3.1 Frequent arguments against filing for IP protection for ICT inventions

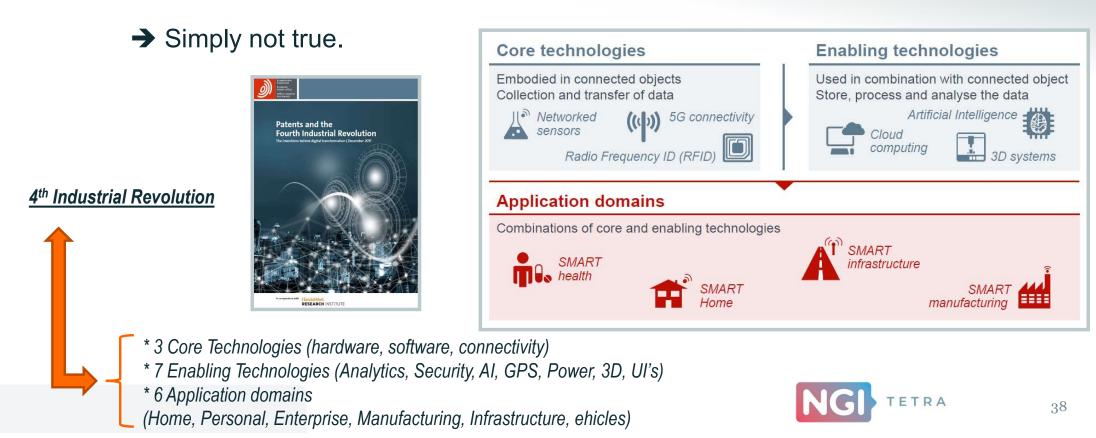
Argument 1: "ICT inventions cannot be protected"



3. To protect or not to protect?

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3. To protect or not to protect?

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Argument 2: "patent proceedings are too long" (3 – 5 yrs before grant on average)



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3. To protect or not to protect?

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Argument 2: "patent proceedings are too long" (3 – 5 yrs before grant on average)

This is generally an advantage within the ICT sector

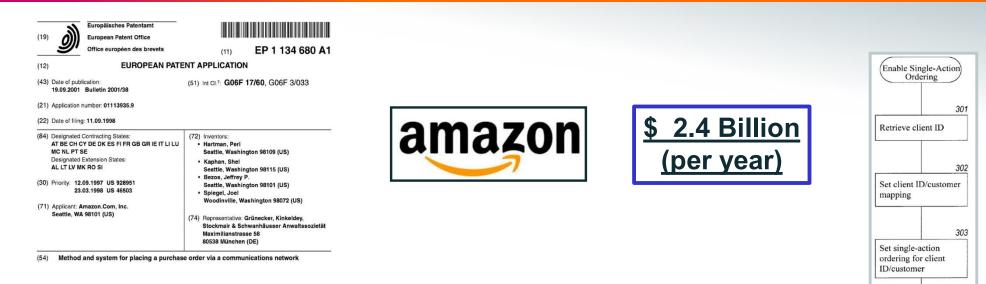
- Applicants are given more time to adapt the scope of the patent to the product that will be really developed and marketed.
- → The writing process allows inventors to take a larger perspective on the technology, to consider new embodiments, and approach new clients.
- → The published specification & claims provide a **smoke screen** for competitors.





3. To protect or not to protect?

3.1 Frequent arguments against filing for IP protection for ICT inventions



R1. A method for ordering an item using a client system, the method comprising:

- receiving from a server system a client identifier of the client system;
- persistently storing the client identifier at the client system;

- displaying information identifying the item and displaying an indication of a single action that is to be performed to order the identified item; and

- in response to the indicated single action being performed, sending to a server system a request to order the identified item and automatically sending the client identifier

whereby a user does not input identification information when ordering the item.



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Return confirming

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3. To protect or not to protect?

3.1 Frequent arguments against filing for IP protection for ICT inventions

Argument 3: "it is too expensive"



3. To protect or not to protect?

3.1 Frequent arguments against filing for IP protection for ICT inventions

Argument 3: "it is too expensive"

Yes, but it is a virtuous circle with favorable results

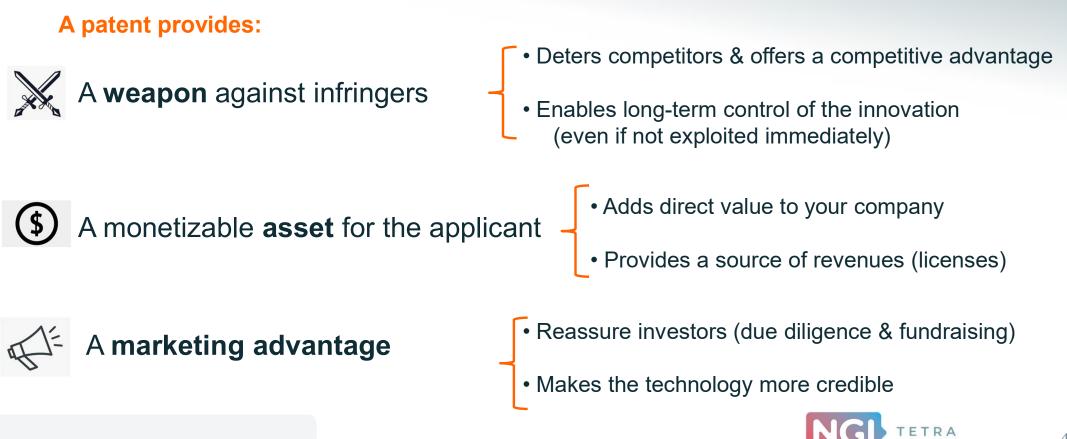
- **Financial funding** is increasingly available at the European and national levels.
- **> Strategic choices** and valuation allow keeping the costs under control.
- → IP helps raising funds and attracting external finance (venture capital firms and future licensees).





3. To protect or not to protect?

3.2 Summary





3. To protect or not to protect?

3.2 Summary

What IP strategy ?

When? Where? How? - There is no golden rule -

The best IP strategy depends on numerous criteria:

- → Your technology
- → Your **business plan** and your **budget**
- ➔ Your competitors
- → Your future geographical coverage

Adapt your IP strategy depending on the goal that you are pursuing!

Essential asset for longevity



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Questions & Responses

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