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## Task 4.5 – Commercialisation and Patenting Strategies and the workshop/ case study

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# AGENDA

- Introduction of Innovation & Impact Centre
- Intellectual property rights and how to use them
- Ownership versus inventorship
- The criteria for patenting
- What is in it for you?
- Patent & copyright
- Case study



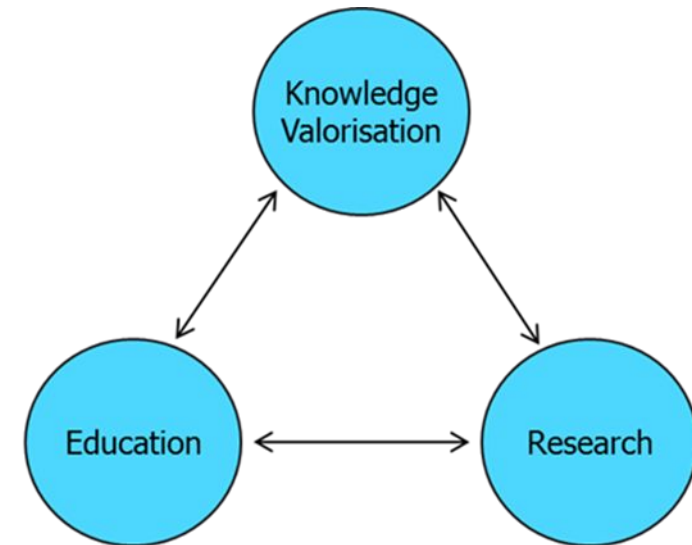
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# Innovation & Impact Centre

Possibilities for  
Business development:

- Commercialize via
  - Spin out
  - Established company
- Give party access to IP via
  - License IP
  - Sell IP
- Or a combination: generate cash flow for a start-up while exclusively cornering EU market

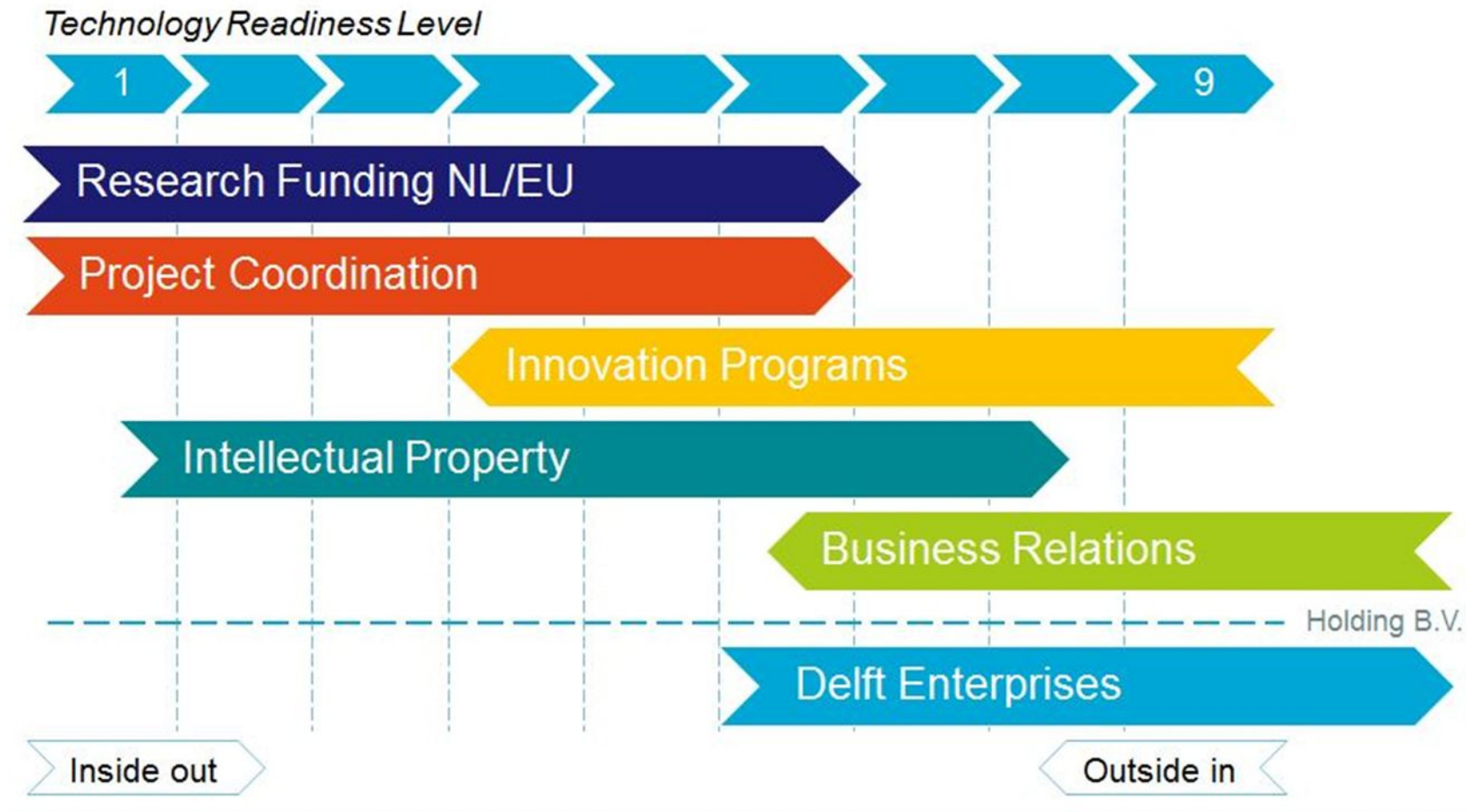




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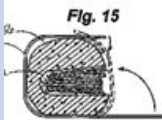
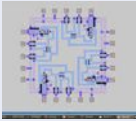


# POSITION IP TEAM WITHIN I&IC

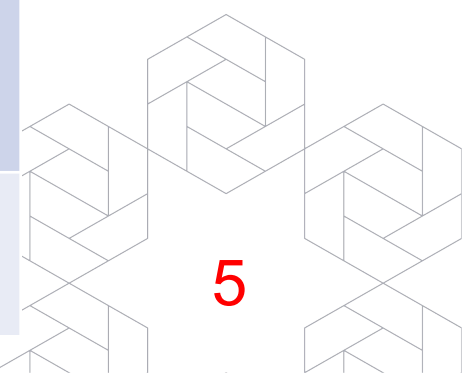




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Right (years)	Type of creation	Protection through	Example
Copyright (life-long + 70)	Manuscripts, databanks, libraries, books, papers, theses, source code	Exists through creation	
Design (5x5)	Aesthetic aspects and shape of items: <u>not</u> technical aspects	Registration	
Patents (20)	Technical inventions, source code – if algorithm has ‘technical effect’	Grant after examination	
Topography (10)	Layout or topography of an integrated circuit ("chip")	Registration	
Trade secrets (indefinite)	Source code, recipes, procedures	Exists by secrecy	
Trademarks (indefinite)	Distinctive signs, names of companies/products	Registration	





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### Practising and licensing;

IP allows us to create unique products/methods that others are not allowed to copy. IP allows us to establish various types of strategic business partnerships



### IP as a collateral;

IP Rights can also facilitate the establishment of joint ventures. For example what DE does is an example of IP usage as a collateral.



### Defensive usage;

It increases the freedom to operate for the firm practicing or licensing the patent without infringing the rights of others.





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## Apple Watch Ban



A patent infringement case is pushing for Apple to stop selling its two most recent Apple Watch models, the Series 9 and Ultra 2.

## The Monopoly of Philips on the shaver three-headed rotary





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## WHO OWNS THE INVENTION? WHO IS THE INVENTOR?



Employees of TU Delft – Article 12 ROW and 1.22  
CAO - VSNU



Guest Lecturer – Hospitality agreement



Subsidy Provider (Horizon 2020, NW0)



Contractual Arrangement with commercial parties –  
Research Agreement, Consortium Agreement,  
Framework Agreement



Students` IP





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## PATENT DO'S & DON'TS

- Do not publish or tell anyone before patent is filed



- Do not sell or demonstrate anything incorporating the invention before your patent is filed
- Seek professional advice at an early stage
- Fill in the university IDF as soon as you have a concrete idea
- Sign a non-disclosure agreement (NDA) before talking to other parties – we can help you draft this



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- Technical solution to technical problem in a technical field (also software)
- New (not public), inventive (not obvious) and industrially applicable
- Inventor gets protection in exchange for sharing her/his idea with society; a right to exclude others from the market
- Publication after 18 months
- Governed by national laws, bound to territory. Restricted in time (~20 years)
- Obtained by application, examination, registration and granting by authorities
- A “property” (of TU Delft!) which can be sold, leased, licensed, loaned, pledged

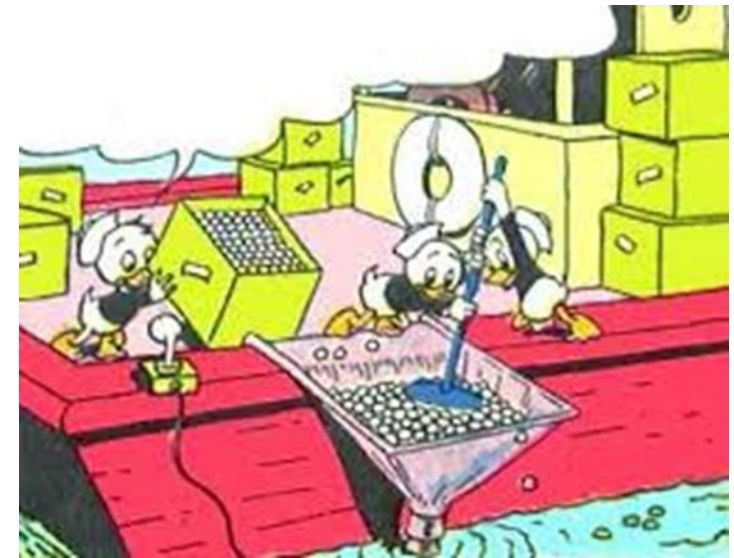


Image from 'The Sunken Yacht',  
© 1949 Walt Disney Corporation.



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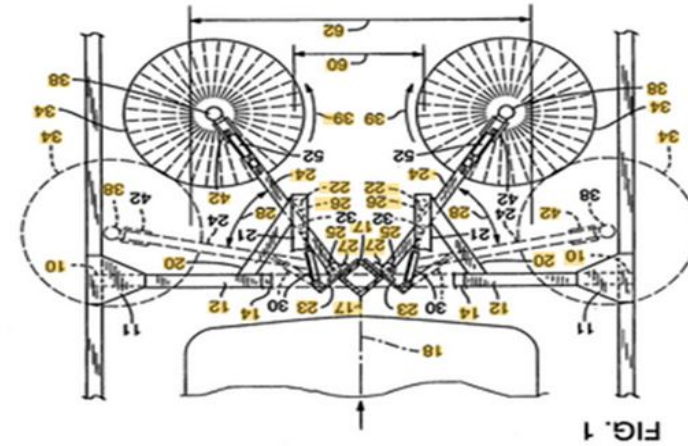
# WHAT DO YOU SAY?



U.S. Patent 5,367,736

Sheet 1 of 4

Nov. 29, 1994



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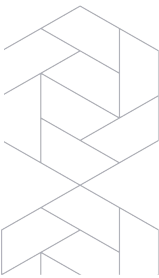
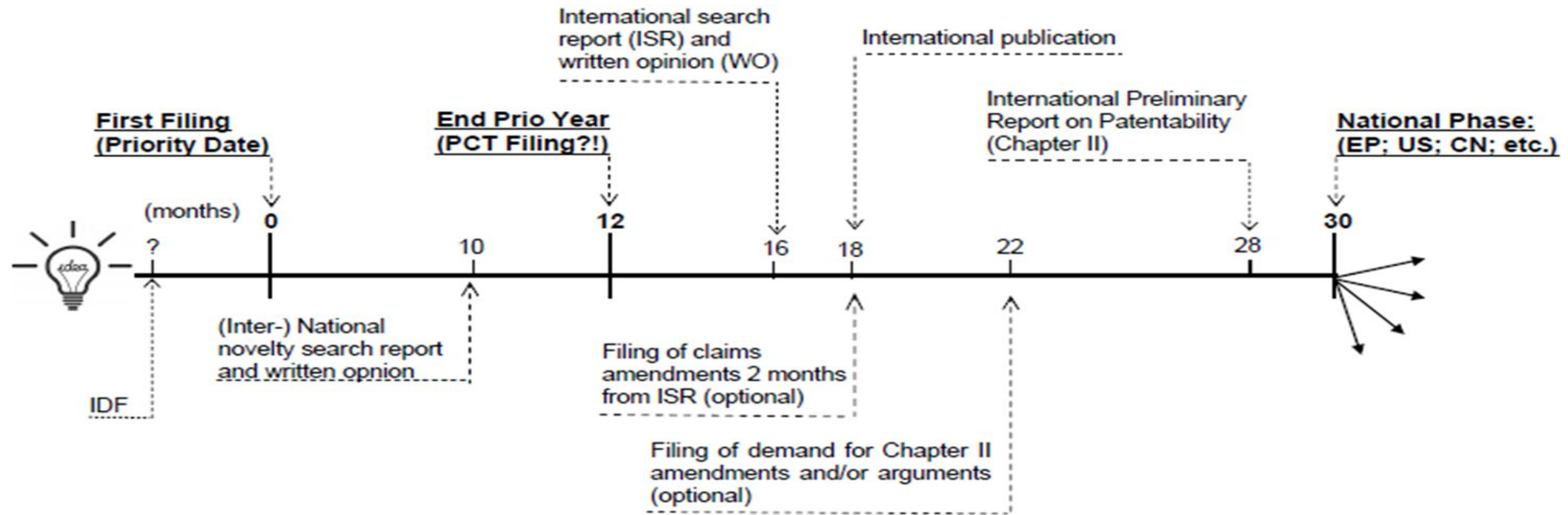
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# PATENT TIMELINE





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# PATENT CONFIDENTIALITY

The Novelty Criteria of the Patent law says that there must be no evidence that this novel aspect of your idea has ever been **described** before or **used for the same purpose** before.

**TU Delft patent procedure does not interfere with your publishing schedule!**

Please be sure that the content of your paper does not include an invention which might be subject of a patent and/or an industrial design application.

The IP department may need approximately 8 weeks to evaluate, prepare a patent application and submit it, after that you are free to publish your papers.





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# HOW TO START?



## 1- The preliminary search report from A Dutch Patent Attorney

The attorney is going to give an opinion whether the invention is a patentable subject. If yes whether the invention has patentability criteria. These are novelty, inventive step of the invention and susceptible industrial application.

## 2. The Dutch filing

The preparation of patent file takes about 4 weeks.



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# WHAT IS IN IT FOR YOU?



✓ Remuneration

Legally TU Delft only owner (Art 12 ROW);  
However, TUD has a reimbursement policy: 1/3 of the *net* profit *pro rata* to their individual contribution as established in the IDF

✓ Attribution

After 18 months the invention will be published in public patent databases and added to the PURE-publication database

✓ R&D funding

Using your invention and the patent as background and know-how to improve IMPACT and EXCELLENCE in grant applications;  
Support provided by our colleagues from the Subsidy Team

✓ Or

Sell it to a company in exchange for R&D funding.  
Often along with a “Right of First Negotiation” on future IPR

✓ Starting your own company

TU Delft-IP can be used as a tool for funding your start-up;  
Support provided by our colleagues from Delft Enterprises





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## • SUBSIDIES

Find funding › Upcoming calls › Take off phase 1 - Feasibility studies WO

### Take off phase 1 - Feasibility studies WO

Enterprising scientists who want to investigate whether it is feasible to commercially apply an innovative research result can apply for funding via Take-off phase 1 - Feasibility studies WO. This program is aimed at stimulating and supporting economic activity and entrepreneurship on the basis of science.

Find funding › Upcoming calls › Faculty of Impact Life Sciences and Health

### Faculty of Impact Life Sciences and Health

The Faculty of Impact program is aimed at researchers who want to achieve impact with their research and are interested in setting up their own company. These researchers can now submit a grant application to become a so-called "fellow" at the Faculty of Impact. A maximum of € 185,000 is available per application. The duration of this program is two years.

<https://www.nwo.nl/en/find-funding>



European Commission | Funding & tender opportunities  
Single Electronic Data Interchange Area (SEDIA)

HOME SEARCH FUNDING & TENDERS ▼ HOW TO PARTICIPATE ▼ PROJECTS & RESULTS WO

Update date: 14-NOV-22 - Record Control Number: 136005

#### Poland's NCP

Person of contact: Zuzanna Andracka

Function(s): Legal and Financial aspects

Contact Zuzanna Andracka

#### Organisation

National Centre for Research and Development

Chmielna 69 - 00-801 Warsaw | Poland

Tel: 48571226606 - Fax: N/A

Website: <https://www.kpk.gov.pl>

Funding & tenders (europa.eu)

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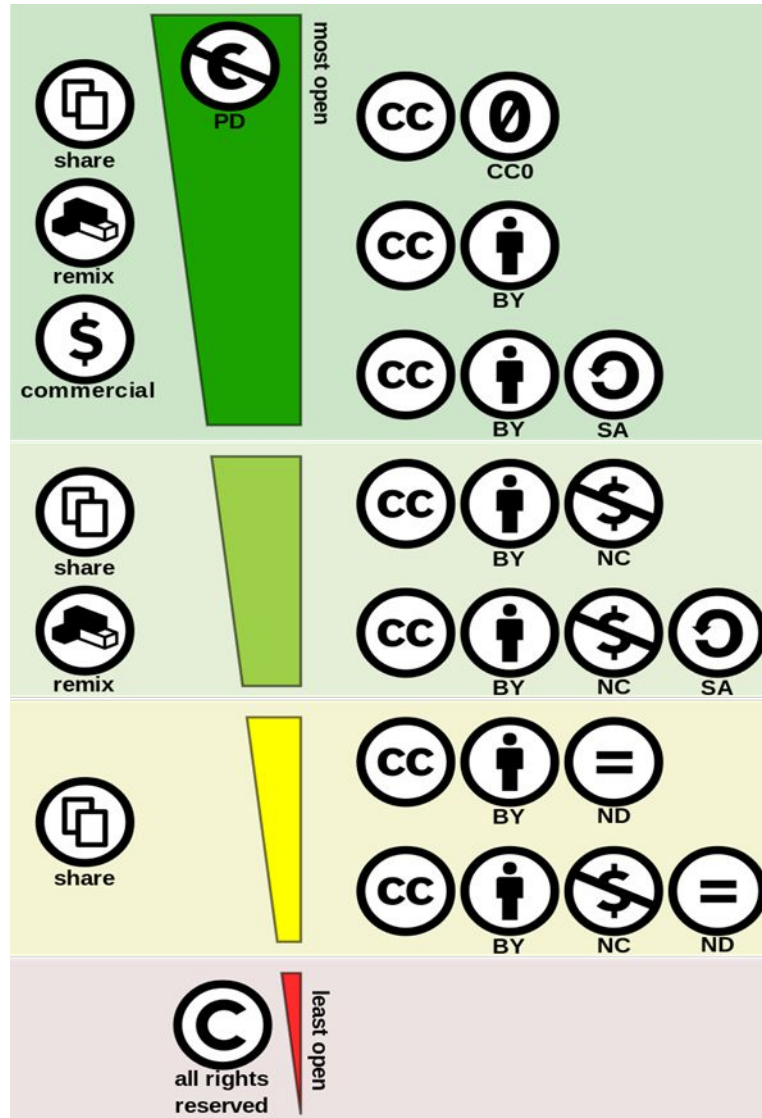


# COMPUTER PROGRAMMES VS PATENTS

Copyright	Patent
The creation must bear a personal mark of character, meaning there must have been an identifiable involvement of a human mind guiding.	The patent analysis is aimed at the language's underlying function.
Registration is only to necessary to enforce an infringement.	Registration is a long process and expensive. Usually commercial life of the software may expire before patent is issued.
No need to prove a technical character.	A computer program can be protected by patent, only if it has technical character (sets of instructions for causing a device to operate)



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- Creative commons licenses help determine permissions that you may need depending on your purposes.
- CC licenses let you easily change your copyright terms from the default of “all rights reserved” to “some rights reserved.”

A derivative of [“Creative commons license spectrum”](#) by Shaddim is licensed under [CC BY-SA 4.0](#)



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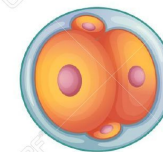
# COMMERCIAL VALUE OF AN INVENTION

- 1- With which IP can I protect my idea/ invention?
- 2- Is it a stand-alone technology?
- 3- How easy can I detect an infringement if a third party uses the invention?
- 4- Can you establish a portfolio?

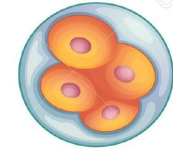
## Human Embryonic Development



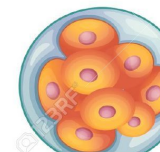
Fertilized egg



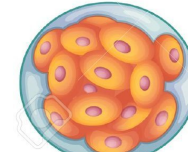
2-cell stage



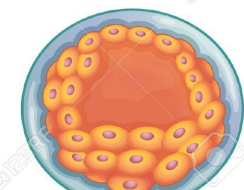
4-cell stage



8-cell stage



16-cell stage



Blastocyst



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# CASE STUDY GROUPS

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Jarosław Sołtys



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# CASE STUDY – AURORA FLIGHT SCIENCES CORP. (RESEARCH SUBSIDIARY OF BOEING) EP3579065A1

## SYSTEMS AND METHODS TO AUTOMATE COMPOSITE MANUFACTURING QUALITY CHECKS

### Abstract

An automated inspection system for monitoring a manufacturing process includes a core platform to operatively connect a plurality of systems or subsystems via one or more interfaces. A sensor system operatively coupled with the core platform to monitor one or more characteristics of a manufactured article. An actuation system operatively coupled with the core platform to implement the manufacturing process based on instruction from the core platform. The core platform is configured to receive a first measurement of the one or more characteristics of a composite article from the sensor system after application of a plurality of layers of one or more raw materials; receive data regarding a second measurement of the one or more characteristics from the sensor system after curing the composite article; and generate an alert in response to a determination that a defect exists in the composite article based on the first or second measurement.



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3. Dependent claims 2 to 10 and 12 to 15 do not contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of Article 56 EPC regarding inventive step.

3.1 The additional features of claims 2 to 5 and 12 relating to functionalities of the state manager or core platform and the additional features of claim 15 relating to explicit alerts are considered to fall in the choice of options apparent to the person skilled in the art and not contributing anything of inventive significance.

3.2 The additional feature of claim 6 relating to generate an alert in response to a third measurement after performing a trim operation is considered to be a further implementation that the skilled person would readily apply in the framework of his ordinary competences, whenever defect due to the trim operation are taken into account for the quality assessment of the manufactured components article. Hence, this feature cannot contribute to an inventive step.



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# MENTIMETER

- What can we add as additional features to make the invention “inventive”?
- What can we add or what can we change to convince the patent examiner that the invention is not obvious to “skilled person in the art”?

**Go to [menti.com](https://www.menti.com)**

**Usecode:27374889**



# AMENDED CLAIMS

composite article based on the first or second measurement; and  
a state manager (136) operatively coupled with the core platform (104) to determine that  
a defect exists in the composite article, wherein determining that a defect exists in the composite  
article comprises comparing sensed data to one or more stored threshold values, said threshold  
values having been learned through a machine learning process by a trend analysis manager  
(138).

~~2. The system (100) of claim 1, further comprising a state manager (136) operatively coupled with the core platform (104) to determine a defect associated with the one or more characteristics.~~

3. The system (100) of claim 2, wherein the state manager (136) is configured to determine whether a first defect exists in the composite article based on the first measurement.

4. The system (100) of claim 2, wherein the state manager (136) is configured to determine whether a second defect exists in the composite article based on the second measurement.

5. The system (100) of claim 2, wherein the state manager (136) is configured to:  
identify a value corresponding to the one or more characteristics associated with the defect based on the first or second measurement; and

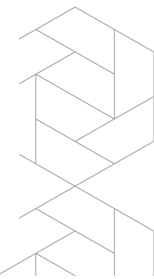




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110. A method of determining the integrity of a composite article comprising:  
measuring, by a sensor (110), a first characteristic corresponding to integrity of a composite article during layup of the composite article;  
measuring, by the sensor (110), a second characteristic corresponding to integrity of the composite article after curing the composite article;  
identifying, at a core platform (104), a defect based on the first or second characteristic;  
and  
generating an alert in response to a determination that a defect exists in the composite article based on the first or second characteristic,  
wherein determining that a defect exists in the composite article comprises comparing, by a state manager (136) operatively coupled with the core platform (104), sensed data to one or more stored threshold values, said threshold values having been learned through a machine learning process by a trend analysis manager (138).





~~11.~~ The method of claim ~~10~~, further comprising:  
determining, by the core platform (104), a defect value associated with the first or second characteristic;  
comparing the defect value to a plurality of defect values; and  
designating the composite article as containing a defect based on the comparison.

~~12.~~ The method of any of claim ~~10~~ or claim ~~11~~, wherein the first or second characteristic comprises one of a density, a temperature, a chemical composition, and a thickness associated with the composite article.

~~13.~~ The method of any of claims ~~10~~ to ~~12~~, further comprising transmitting the alert to a human machine interface (112) operatively coupled with the core platform (104).

~~14.~~ The method of any of claims ~~10~~ to ~~13~~, wherein the alert comprises video or audio identifying the defect.

15. A non-transitory machine-readable storage device comprising instructions which, when executed by a computer, cause the computer to carry out the method of any of claims 10 to 14.

**THANK YOU**



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