Automated searches; threat or opportunity?

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CEPIUG 10'th YAC
9-11 September 2018 Milan

Best time to give a presentation

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Presentation overview

- The vision & the purpose
- Online demo and examples
- Human vs machine

Automatch -> IPScreener

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The vision & the purpose

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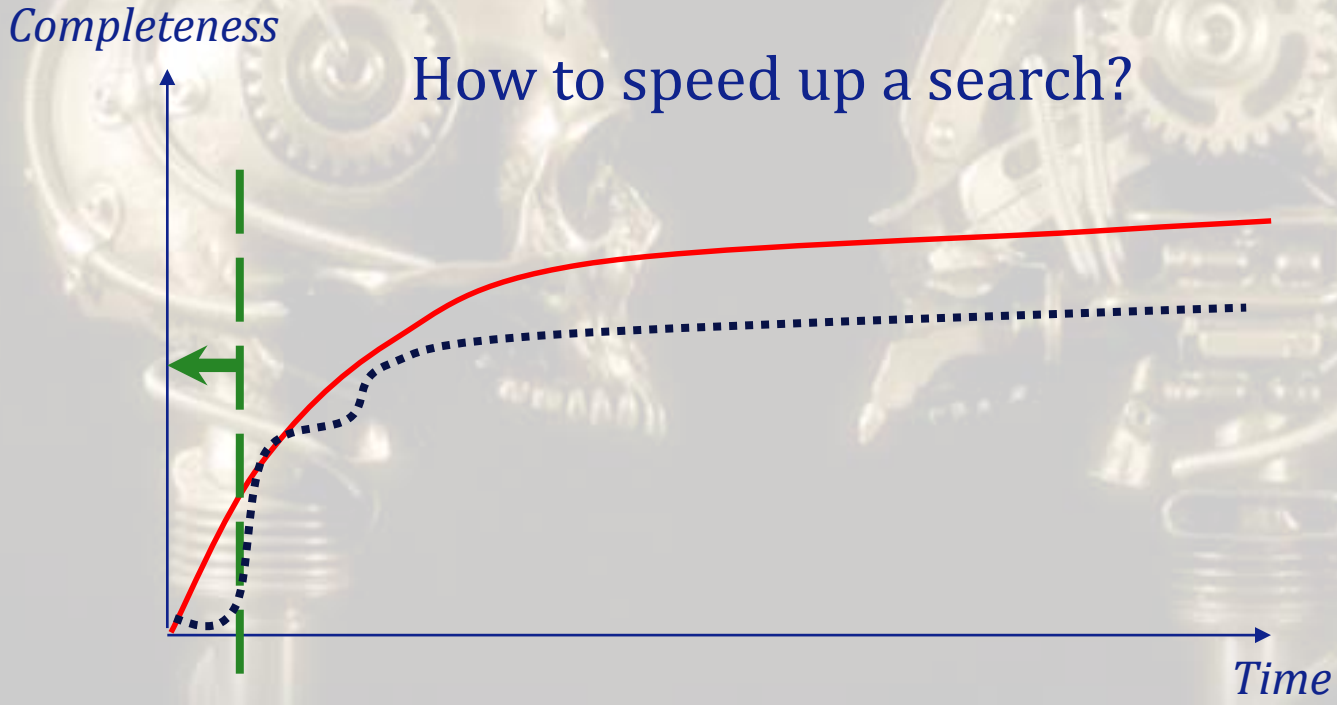
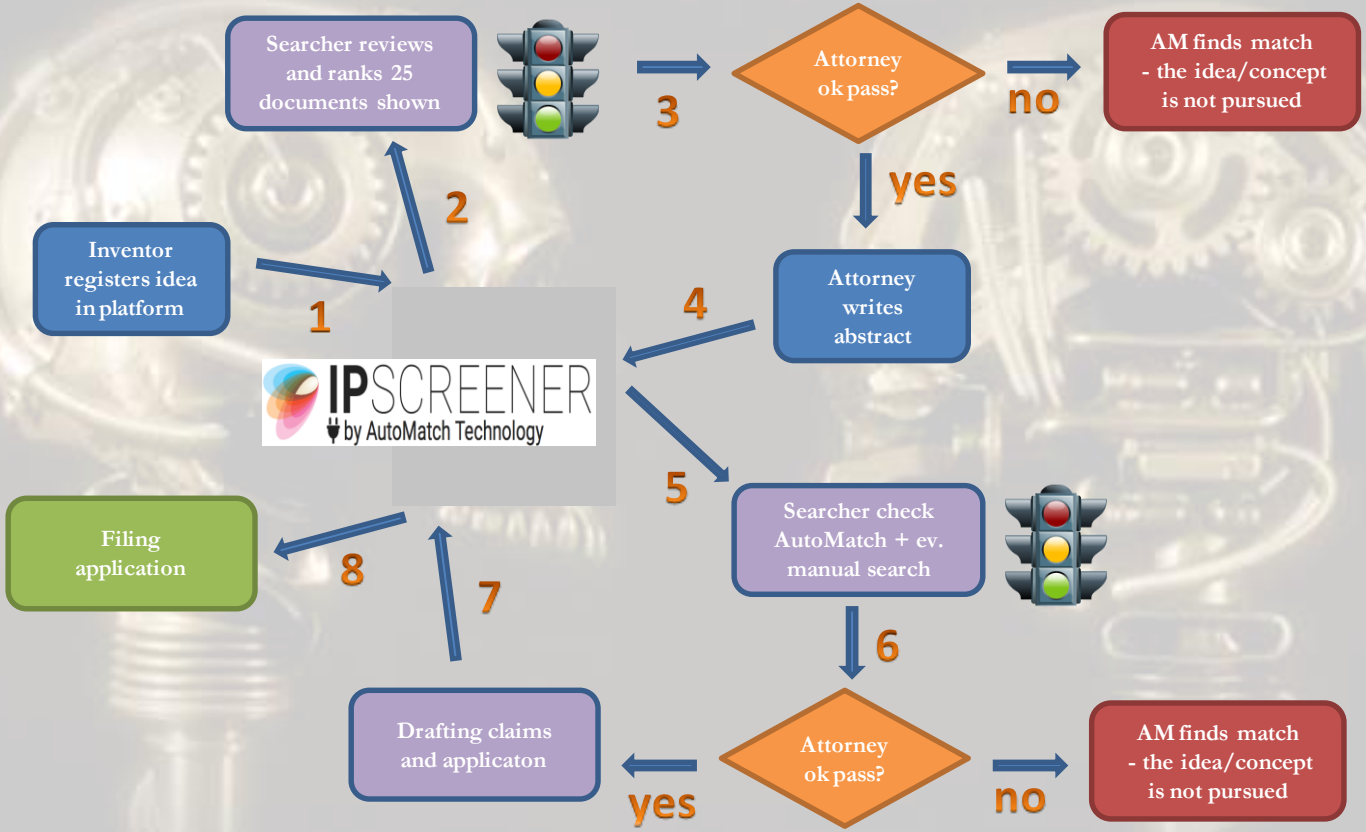
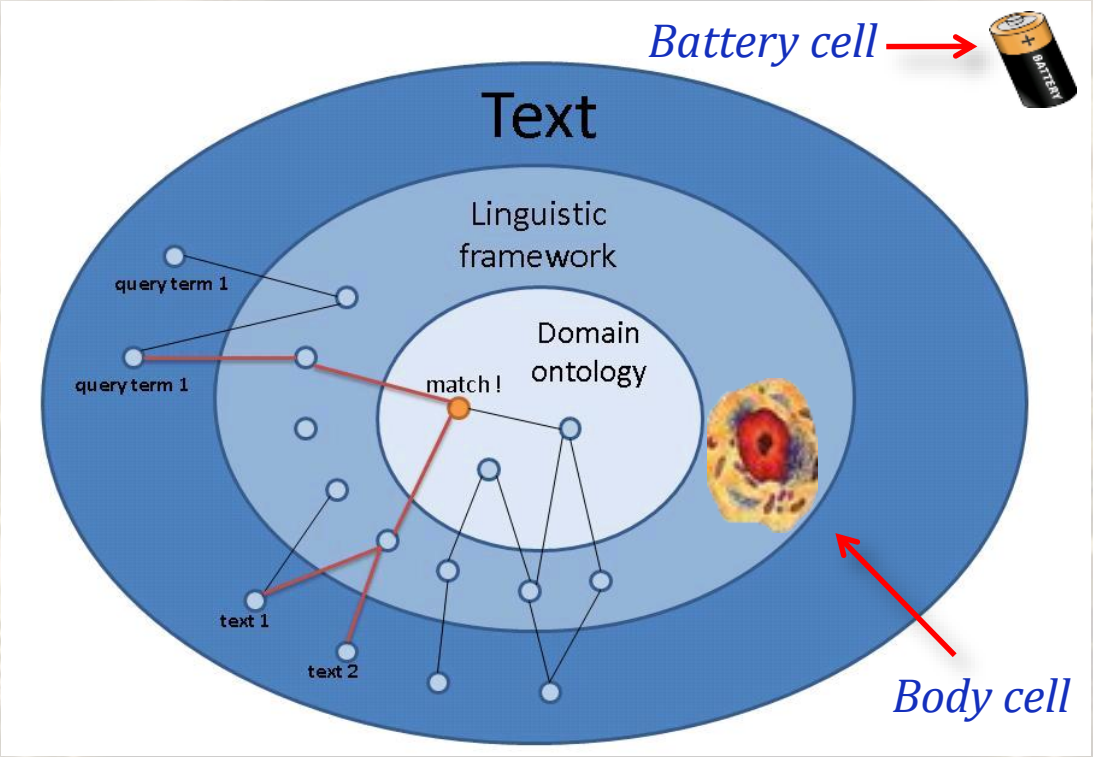


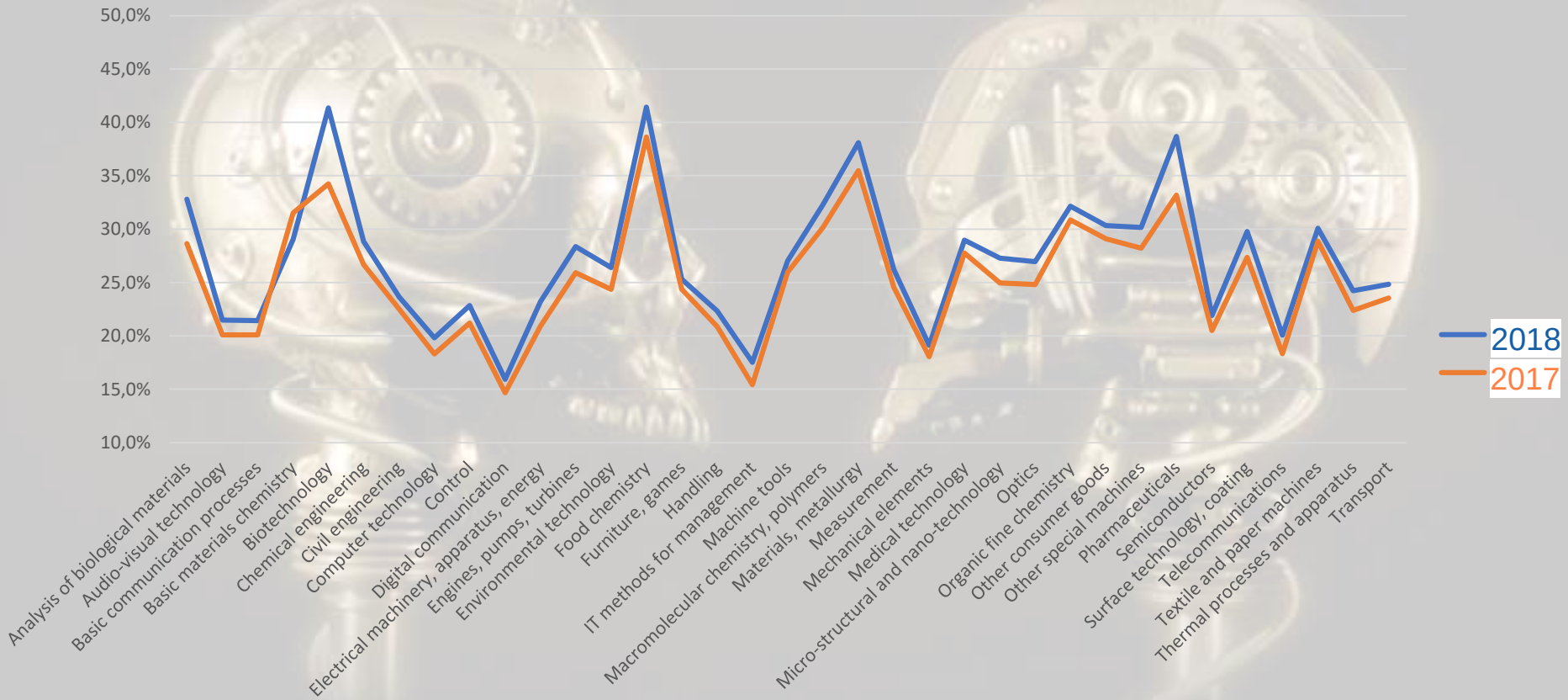
The vision & the purpose



How do we do it?

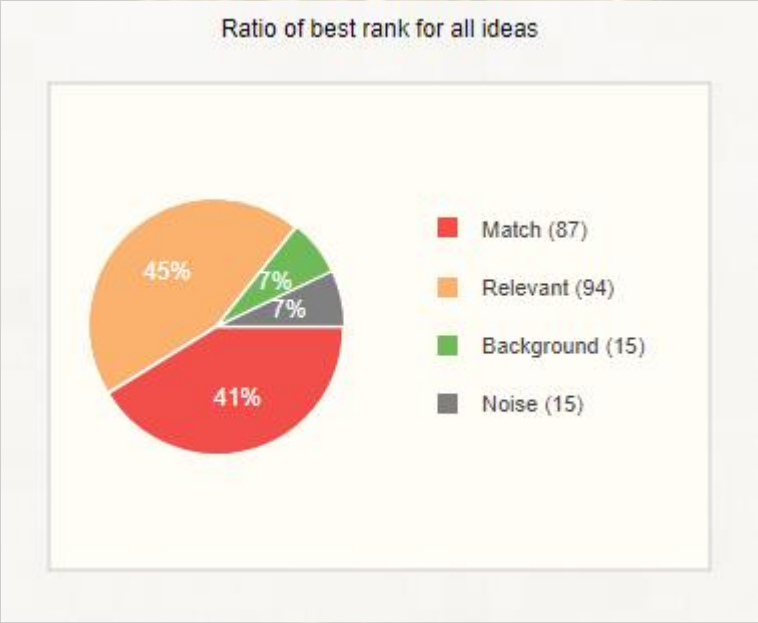


Performance review model (recall top 100)



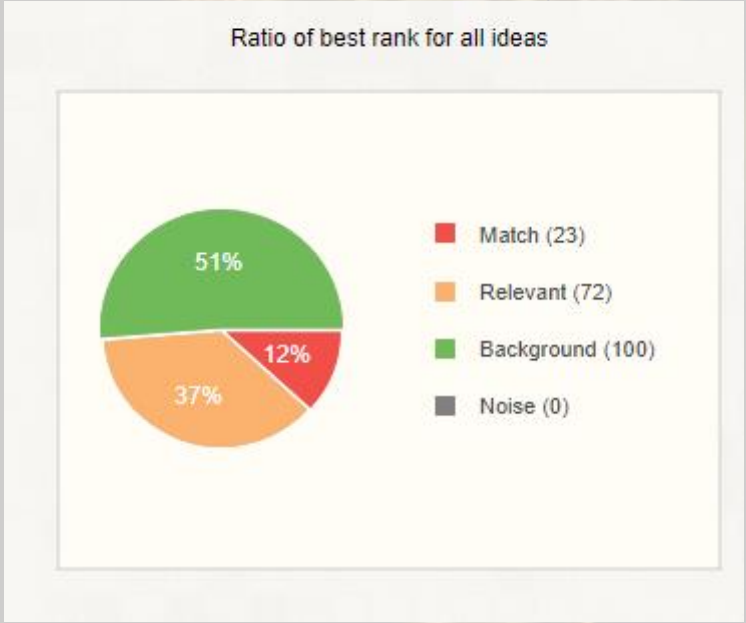
Examples

Ex 1: Invention idea concepts*



* searches based on early ideas/concepts at a Swedish national innovation agency

Ex 2: Patent applications (ASML data)*



* searches on patent applications, pre-examination procedure

Online demo and examples

https://ipscreener.com

Human vs machine

IPscreener Score	2.37 (demo 8 cases)
IPscreener Score	2.3 (230 ASML cases)
Usage of results in reports	44.6% (230 ASML cases)
Searcher Score	1,7 (230 ASML cases)

IPscreener Score: average citation value of prior art cited by the tool (X=1, Y=2, A=3, Noise=4)

Searcher Score: average citation value of prior art cited by the searcher spending 2-3 days of manual searching (X=1, Y=2, A=3, Noise=4)

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Opportunities to use IPScreener

- ✓ At the beginning of a search as a kick start
- ✓ At the end of a search as a safety check
- ✓ To save search time for simple ideas
- ✓ Integrate in your IP management tool
- ✓ Other?

Best time to give a presentation

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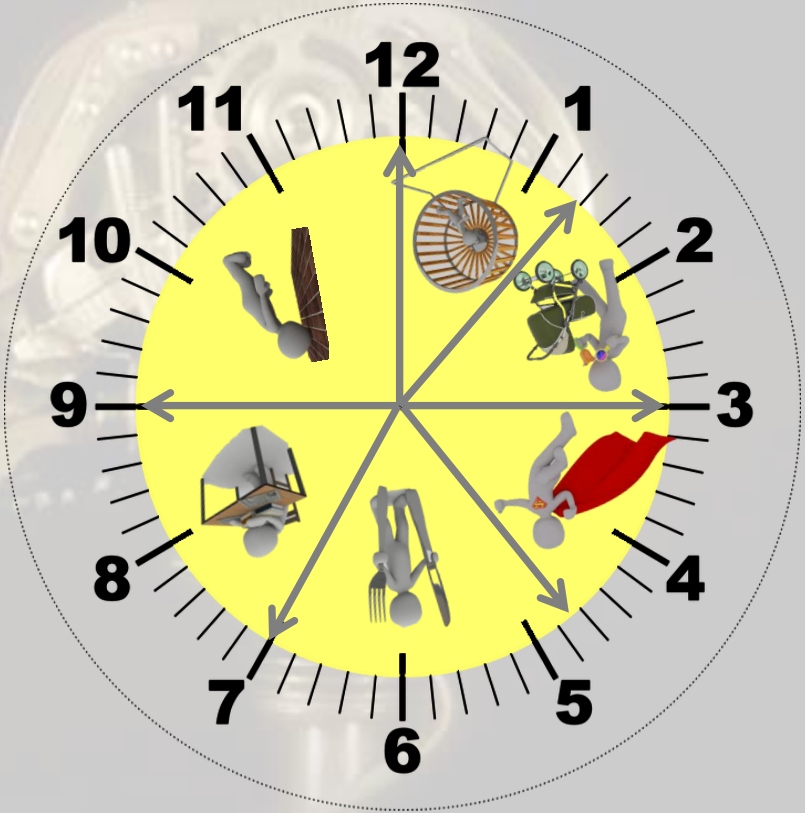
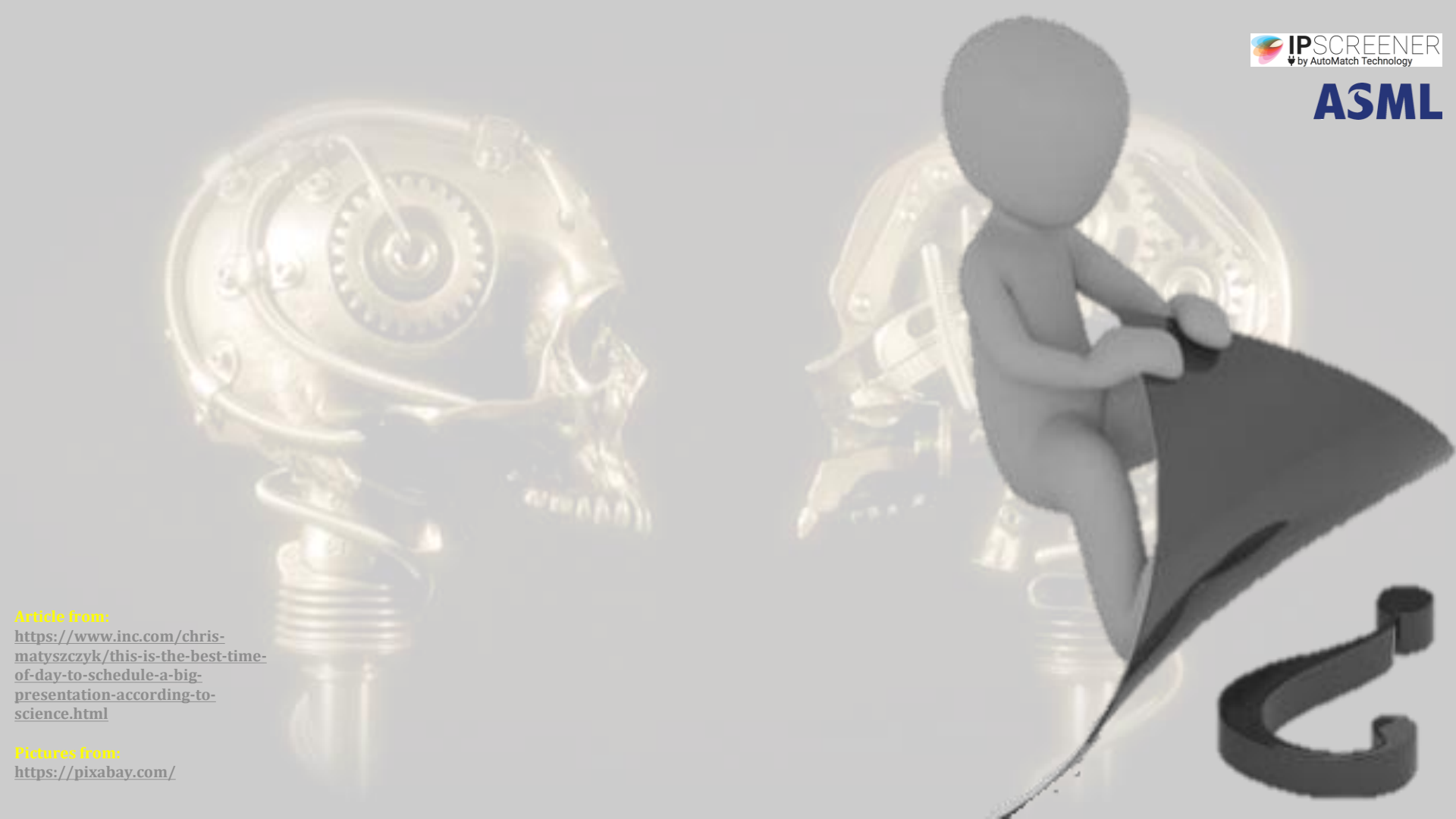
"This research is highly entertaining, but hardly gospel…. Otherwise every 10 am meeting would be full of alarmingly alert humans taking on the problems of the world and slaying them with the sheer force of their alert minds"...

"I wrote this at 8.15am."

"Research says I should have been trying for a baby instead."



Everybody has it's own clock



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Article from:
https://www.inc.com/chris-matyszczyk/this-is-the-best-time-of-day-to-schedule-a-big-presentation-according-to-science.html

Pictures from:
https://pixabay.com/

The vision & the purpose

1. Client/Inventor submits a new idea, a tool automatically identifies similar documents.

2. The Coordinator/Information professional opens a case dashboard with relevant information

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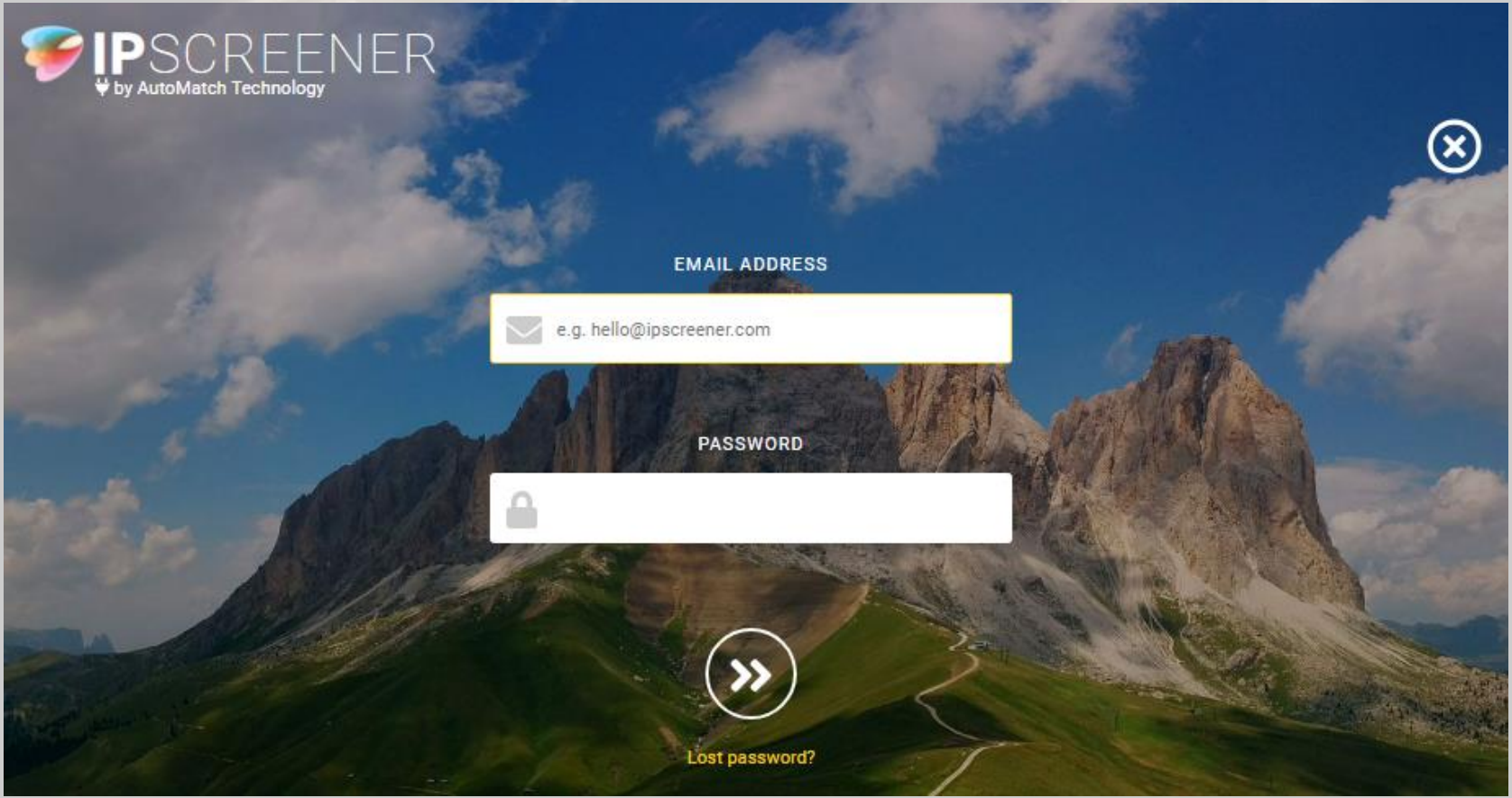


2018S00400 version 2 / 2

Title

Local Gas purge to protect faceted mirrors from degradation

Summary

This degradation can be prevented by creating a purged gas atmosphere, where the facet nature of the mirrors is enabling: the slits between the facets are used as outlets for the (hydrogen) gas purge, thereby effectively protecting each individual facet.

Note

e.g. write a note...

Versions

2 Jul 12, 2018 14:58

1 Jul 12, 2018 14:54

NEW VERSION

Master

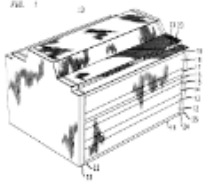
#1

US5665637 Passivated faceted article comprising a semiconductor laser

Match Relevant Background Noise

Provision of a novel passivation layer can result in improved reliability of semiconductor lasers having a laser cavity defined by 2 laser facets. In a preferred embodiment, the passivation layer is a zinc selenide layer (e.g., 5 nm), formed on an essentially contamination-free laser facet. More generally, the passivation layer comprises at least one of Mg, Zn, Cd and Hg, and at least one of S, Se and Te. Typically, the facets are formed by cleaving in vacuum, immediately followed by in-situ deposition of the novel passivation layer material on the facets.

"...to be local heating due to optical absorption and non-radiative recombination of optically generated carriers at the facets, and the resulting positive feedback. Furthermore, the dielectric facet coating itself or the impurities in the coating can react with the semiconductor laser facets in the presence of light, heat and bias energies, resulting in facet degradation. It is known that laser performance degradation can be reduced by provision of a contamination-free facet, followed by in-situ application of a passivation layer. U.S. Pat. Nos. 5,063,173 and 5,144,634 disclose that the passivation layer consists of Si, Ge or Sb, and that the passivation layer is deposited in situ onto a contamination-free laser facet. U.S. Pat. No. 5,171,717 discloses apparatus for cleaving semiconductor wafers in a vacuum system. See also U.S. patent application 08/408,678, filed Mar. 22, 1995 by M. Hong et al., which discloses gallium oxide as a passivation layer. Despite the substantial progress that..."

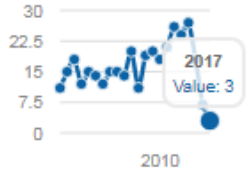


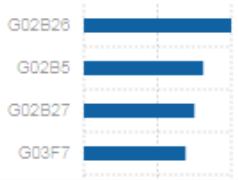
Published September 09, 1997 *by* LUCENT TECHNOLOGIES INC.; *and first priority* November 17, 1995

Link to Espacenet

IPC: H01S3/10, H01S3/06, H01S5/00, H01S5/02, H01S5/028, H01S5/16

e.g. write a comment...





modes include catastrophic optical damage (COD) and gradual degradation due to optically accelerated facet oxidation. The main cause of COD is believed to be local heating due to optical absorption and non-radiative recombination of optically generated carriers at the facets, and the resulting positive feedback. Furthermore, the dielectric facet coating itself or the impurities in the coating can react with the semiconductor laser facets in the presence of light, heat and bias energies, resulting in facet degradation.

It is known that laser performance degradation can be reduced by provision of a contamination-free facet, followed by in-situ application of a passivation layer. U.S. Pat. Nos. 5,063,173 and 5,144,634 disclose that the passivation layer consists of Si, Ge or Sb, and that the passivation layer is deposited in situ onto a contamination-free laser facet. U.S. Pat. No. 5,171,717 discloses apparatus for cleaving semiconductor wafers in a vacuum system. See also U.S. patent application 08/408,678, filed Mar. 22, 1995 by M. Hong et al., which discloses gallium oxide as a passivation layer.

Despite the substantial progress that has been made, it would be highly desirable to have available lasers with a readily deposited facet passivation layers that can have further improved reliability. This application discloses such lasers, and a method of making the lasers.

SUMMARY OF THE INVENTION

In a broad aspect the invention is embodied in an article that comprises an improved semiconductor laser of the type that comprises a laser cavity defined by two laser facets. Exemplarily, the article is an optical fiber amplifier that utilizes the improved laser as a pump laser, or an optical fiber communication system that comprises such amplifiers.

More specifically, a laser according to the invention has at least one

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IPSCREENER AutoMatch technology — We are updating, new searches on hold.

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Account expires in 22 days

2018S00400	Local gas purge to protect faceted mirrors from degradation	Jul 12, 2018 02:58 pm	There are no rankings made yet
2018S00241	Correction of angle errors in permanent magnets	Jul 04, 2018 12:51 pm	There is relevant prior art found
2018S00361	Measuring pupils in case a projection lens with a central obscuration	Jul 04, 2018 08:35 am	There is relevant prior art found
2018S00321	Control of tin target position in co2 mp beam	Jun 12, 2018 02:07 pm	There is relevant prior art found
2018S00331	Keyed anti-rotation fluid connection	Jun 12, 2018 01:16 pm	⚠ There is match found
2018S00296	Device for optical power and polarization recirculation and modulation	May 25, 2018 12:43 pm	There are no rankings made yet
2018S00297	“heat generation” pulse for aom	May 22, 2018 01:47 pm	⚠ There is match found
2018S00250	Pellicle fabrication by using ion beam etching	May 22, 2018 11:58 am	There is only background prior art found