[לוגו, תמונה וכו']

נקודת המבט של המבקש

מפגש עם בוחני רשות הפטנטים, 25.2.2020

עינב זילבר, עורכת פטנטים, עו"ד
זילבר עריכת דין . פטנטים . ניהול קניין רוחני

IPAA ISRAEL PATENT ATTORNEYS ASSOCIATION

קצת עלי ועל נושאי השיחה

About Me:

- Academic Background: BSc Physics & Math, LLB
- Professional Background: Patent Attorney, Adv.
- Experience: Law firm experience, Industry experience
- Volunteering: IPAA - Chair, IL Forum for IP Managers (co-founder), IATI – Technical Training to ILPO Examiners
- Recognition: Corporate IP Star by Managing IP specialist guide

נושאי השיחה:

- מי הוא המבקש?
- מה עושים עם פטנטים?
- מה האימפקט של החלטות הבוחנים?
- ניהול פורטפוליו פטנטים בחברות
- הערה – בקשת פטנט ארעית
- העתיד כבר כאן

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מי הוא המבקש?

USA, 2014:

- Total grants: 300,678
- Grants by ownership:
  - Corporations: 280,074 (93.1%)
  - Government: 1345 (0.5%)
  - Individuals: 19259 (6.4%)
- 1000 grants in 2014 ≥ 32 corporations
- 40 grants in 2014 ≥ 844 corporations
  - Holding 63% of grants
- < 40 grants in 2014 – 37,568 corporations

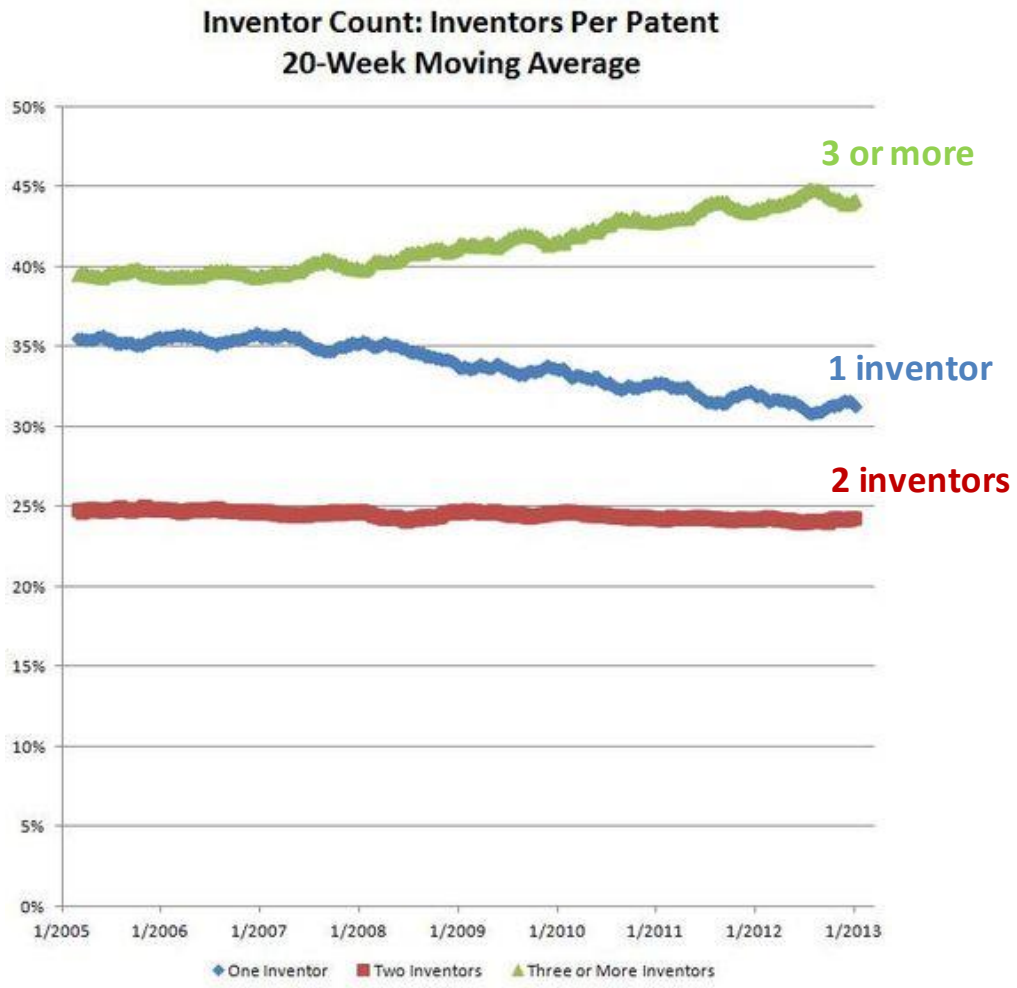
https://www.uspto.gov/web/offices/ac/ido/oeip/taf/apat.pdf
https://www.uspto.gov/web/offices/ac/ido/oeip/taf/data/topo_12.htm

US, 2019:

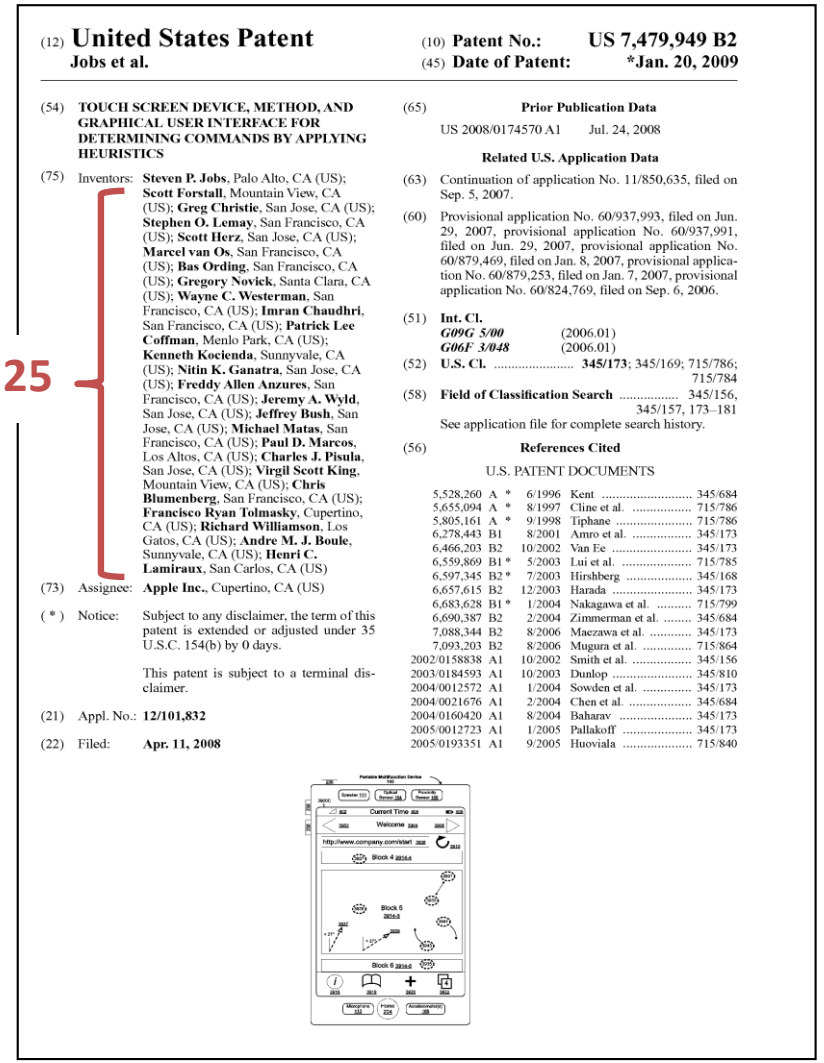
- Total grants: 333530
- Top 50 holds 27%
- Top 5:
  1. IBM 9262 (active families 37,304)
  2. Samsung 6469 (76,638)
  3. Canon 3548 (35,724)
  4. Microsoft 3081 (29,824)
  5. Intel 3020 (24,628)

https://techcrunch.com/2020/01/14/us-patents-hit-record-333530-granted-in-2019-ibm-samsung-not-the-faangs-lead-the-pack/ https://www.ificlaims.com/rankings-global-assets-2019.htm

איך נוצרות אמצאות?



Source: Dennis Crouch, *Patently-O*, Jan. 17, 2013



(12) **United States Patent**
Jobs et al.

(10) **Patent No.: US 7,479,949 B2**
(45) **Date of Patent: *Jan. 20, 2009**

(54) **TOUCH SCREEN DEVICE, METHOD, AND GRAPHICAL USER INTERFACE FOR DETERMINING COMMANDS BY APPLYING HEURISTICS**

(75) Inventors: **Steven P. Jobs**, Palo Alto, CA (US); **Scott Forstall**, Mountain View, CA (US); **Greg Christie**, San Jose, CA (US); **Stephen O. Lemay**, San Francisco, CA (US); **Scott Herz**, San Jose, CA (US); **Marcel van Os**, San Francisco, CA (US); **Bas Ording**, San Francisco, CA (US); **Gregory Novick**, Santa Clara, CA (US); **Wayne C. Westerman**, San Francisco, CA (US); **Imran Chaudhri**, San Francisco, CA (US); **Patrick Lee Coffman**, Menlo Park, CA (US); **Kenneth Kocienda**, Sunnyvale, CA (US); **Nitin K. Ganatra**, San Jose, CA (US); **Freddy Allen Anzures**, San Francisco, CA (US); **Jeremy A. Wyld**, San Jose, CA (US); **Jeffrey Bush**, San Jose, CA (US); **Michael Matas**, San Francisco, CA (US); **Paul D. Marcos**, Los Altos, CA (US); **Charles J. Pisula**, San Jose, CA (US); **Virgil Scott King**, Mountain View, CA (US); **Chris Blumenberg**, San Francisco, CA (US); **Francisco Ryan Tolmasky**, Cupertino, CA (US); **Richard Williamson**, Los Gatos, CA (US); **Andre M. J. Boule**, Sunnyvale, CA (US); **Henri C. Lamiraux**, San Carlos, CA (US)

25

(73) Assignee: **Apple Inc.**, Cupertino, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **12/101,832**

(22) Filed: **Apr. 11, 2008**

(65) **Prior Publication Data**

US 2008/0174570 A1 Jul. 24, 2008

Related U.S. Application Data

(63) Continuation of application No. 11/850,635, filed on Sep. 5, 2007.

(60) Provisional application No. 60/937,993, filed on Jun. 29, 2007, provisional application No. 60/937,991, filed on Jun. 29, 2007, provisional application No. 60/879,469, filed on Jan. 8, 2007, provisional application No. 60/879,253, filed on Jan. 7, 2007, provisional application No. 60/824,769, filed on Sep. 6, 2006.

(51) **Int. Cl.**
G09G 5/00 (2006.01)
G06F 3/048 (2006.01)

(52) **U.S. Cl.** **345/173**; 345/169; 715/786; 715/784

(58) **Field of Classification Search** 345/156, 345/157, 173–181
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

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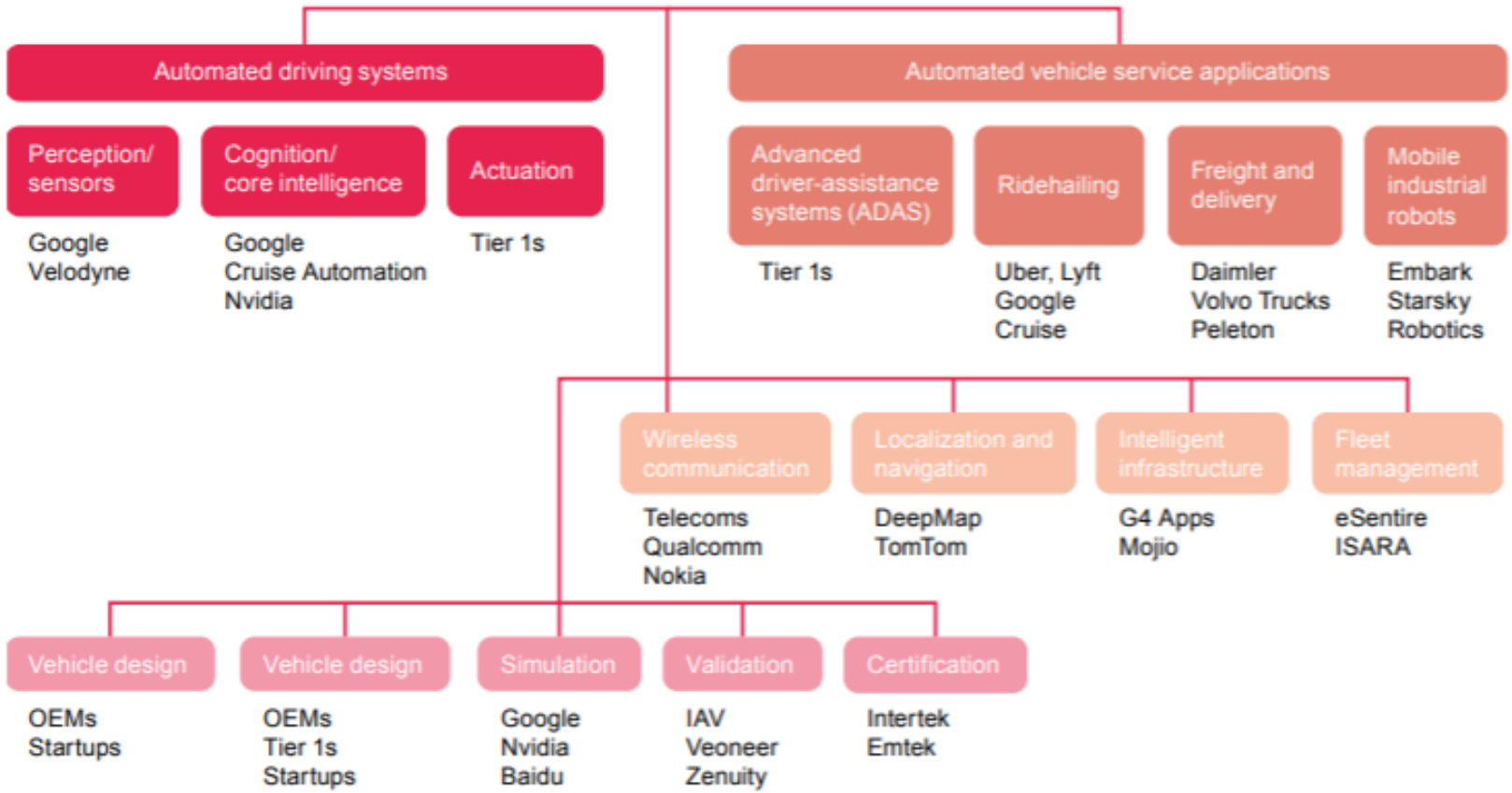
איך מפותחים מוצרים?

Mapping the involvement of AV companies

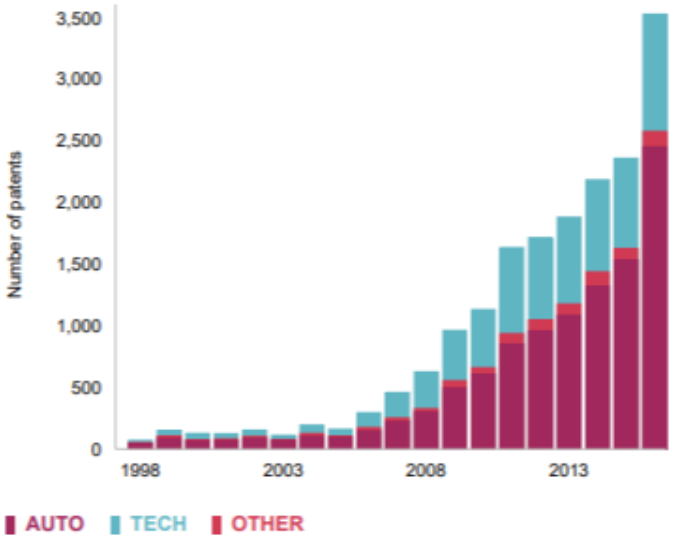
Figure 3.7 Examples of companies working in various AV technologies



Source: Center for Automotive Research (CAR).

The rise of AI, robotics and mobility services is the main driver of the technological shift in the mid-2000s

Figure 3.5 Sectoral breakdown of AV-related patents by frequency



Source: WIPO based on PATSTAT and PCT data (see Technical Notes).

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איך מפותחים מוצרים?

Mapping the involvement of AV companies

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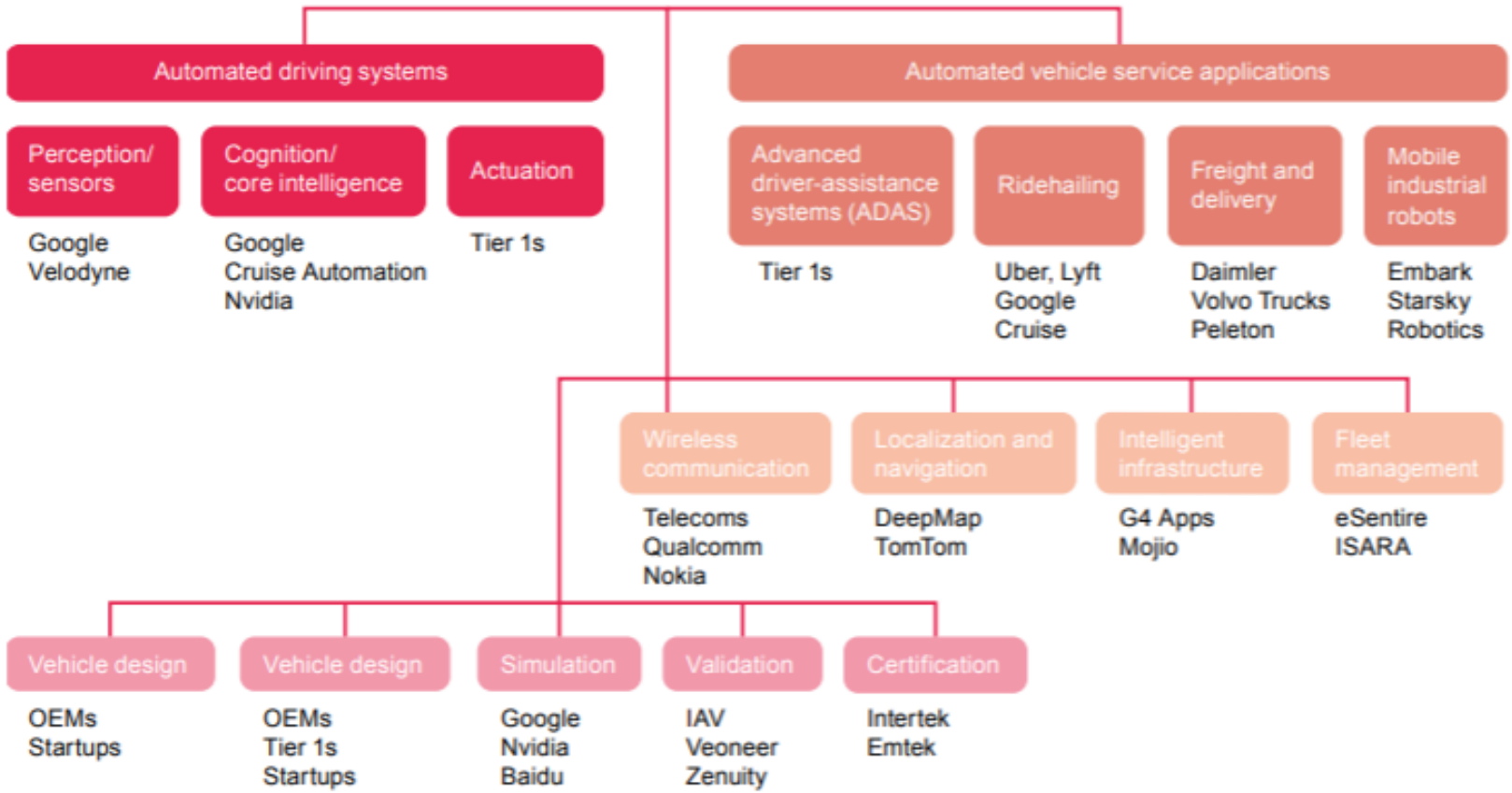

Source: Center for Automotive Research (CAR).

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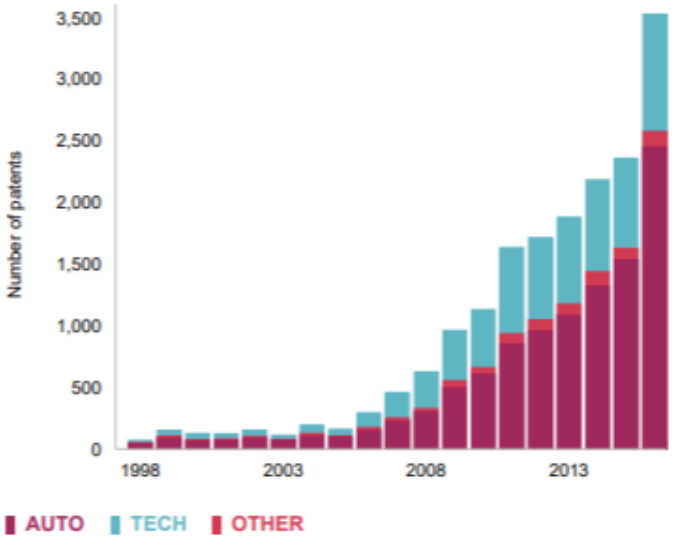

Source: WIPO based on PATSTAT and PCT data (see Technical Notes).

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מה עושים עם פטנטים?

Disruptive Technologies

Controlled Publication

Competition

Big Players

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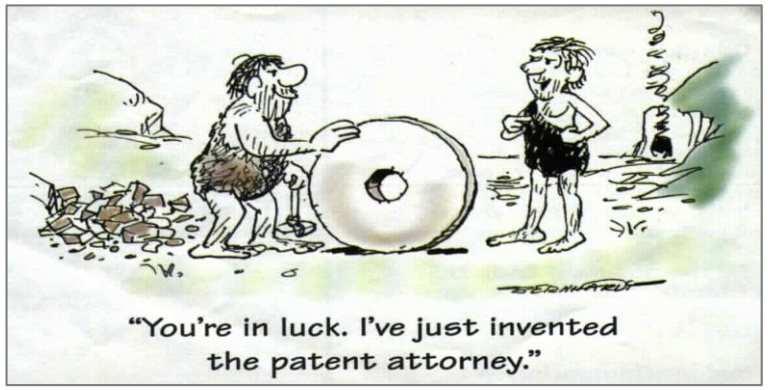
מה עושים עם פטנטים?

A product of team Innovation

A platform for collaborations and transfer of rights

The subject of various processes



Profession, Industry

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מה האימפקט של החלטות הבוחנים?

כשהמבקש מזהה פטנט רלוונטי של אחר:

1 – אני לא מפר

2 – הפטנט לא תקף

- חזקת התקפות
- ידע קודם נוסף

3 – דרך חדשה

- מחקר, פיתוח ויישום נוספים

4 – הפסקת השימוש /רכישת זכויות

ומה אם הפטנט של האחר אינו פטנט מוצדק?

החשיבות של פטנטים טובים עבור חברה:

1 – הסיכון בפטנט צר מדי

2 – הסיכון בפטנט רחב מדי

3 – קיבול מיידי של הבקשה

4 – משפחת פטנטים בינלאומית – ציטוטים שונים במדינות שונות

החשיבות של מרשם הפטנטים עבור חברה:

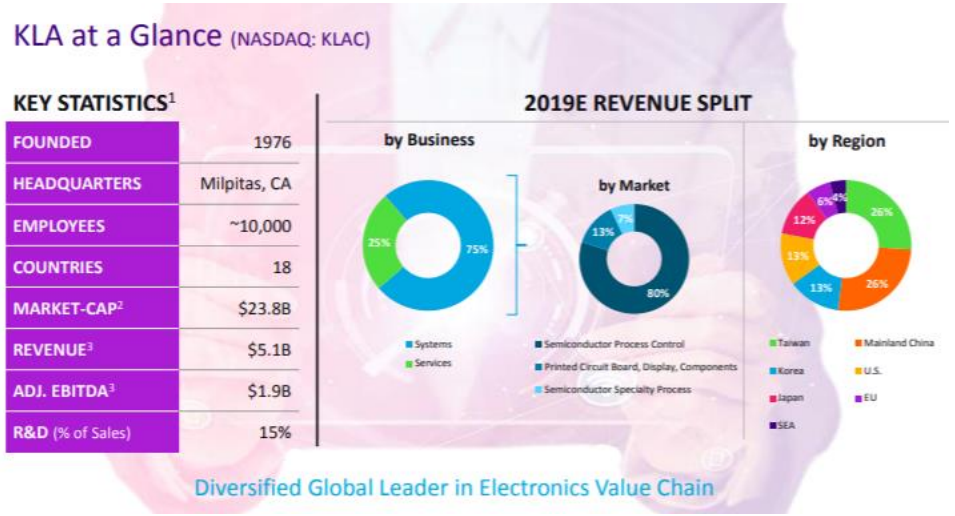
1 – הסיווג כמפתח למיפוי, סינון וניתוח

2 – זמינות המידע

3 – גישה למסמכים ממקום אחד

4 – מידע על סטטוס

בקשת פטנט ארעית - הדוגמא של



US10095122:


KLA-Tencor Invention Disclosure Form

Disclosure No. P4960

1. INVENTOR(S)

Myungjun Lee and Mark D. Smith

2. TITLE OF THE INVENTION (MUST BE FILLED OUT)

Sub-Resolution Assist Feature Engineering for Designing Metrology Targets to Reduce PPE Bias

8. RELATED PRINTED PUBLICATIONS, PATENTS, PATENT APPLICATIONS. PLEASE ATTACH COPIES

KT Invention Disclosure P4714, PCT Application No. PCT/US16/28314 filed Apr. 19, 2016

[1] Registration target design for managing both reticle grid error and wafer overlay, US 7408642 B1.
[2] Structure and method for simultaneously determining an overlay accuracy and pattern placement error, US 7667842 B2.
[3] "Overlay metrology solutions in a triple patterning scheme", SPIE Vol. 9424 94240E, 2015
[4] Myungjun Lee, Mark D. Smith, J Lee et. al., "Lithography-aware overlay metrology target design method," SPIE Advanced lithography, San Jose, CA, USA, Proc of SPIE Vol. 9778 IL, Feb 2016.
[5] Myungjun Lee, Mark D. Smith, Mike Adel, et. al. "Metrology target design (M3D) solution for diagonally oriented (45/45) layer." SPIE Advanced lithography, San Jose, CA, Proc of SPIE Vol. 9778 97782R, Feb. 2016.
[6] Myungjun Lee and Mark D. Smith, "Highly Sensitive focus monitoring technique based on illumination and target co-optimization." SPIE Advanced lithography, Proc. SPIE 9778 2L, 2016.

USE THE ATTACHED SHEETS TO ANSWER THE FOLLOWING QUESTIONS. PLEASE AT LEAST BRIEFLY ANSWER ALL QUESTIONS.
(Attach Engineering Reports or other documentation to this form.)

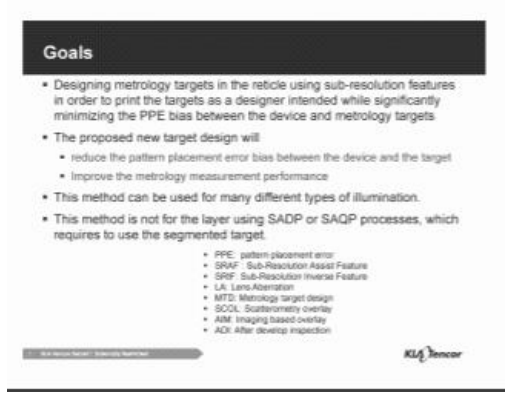
1. GENERAL PURPOSE OF THE INVENTION. STATE IN GENERAL TERMS THE OBJECTS OF THE INVENTION.

The objective of this invention is the design and/or optimization of design of metrology targets to be used for monitoring overlay between different layers during semiconductor manufacture. This invention enables the design and/or optimization of metrology targets that will have the improved target printability (i.e., larger process window) on the wafer as well as the improved device-to-target matching by reducing the placement error offset between the target and the device. By optimally designing patterns in the reticle, the final ADI patterns on the wafer will be same as the designer intended with improved printability and reduced pattern placement error (PPE) bias between the device and metrology targets. This is the completely new method and it will be used for both AIM and SCOL targets with different types of scanner illumination.

1a. BACKGROUND INFORMATION (PSG FIELD OF USE)

In the field of semiconductor metrology, a metrology tool may comprise an illumination system which illuminates a target, a collection system which captures relevant information provided by the illumination system's interaction (or lack thereof) with a target, device or feature, and a processing system which analyzes the information collected using one or more algorithms. Metrology tools can be

□□□



□□□

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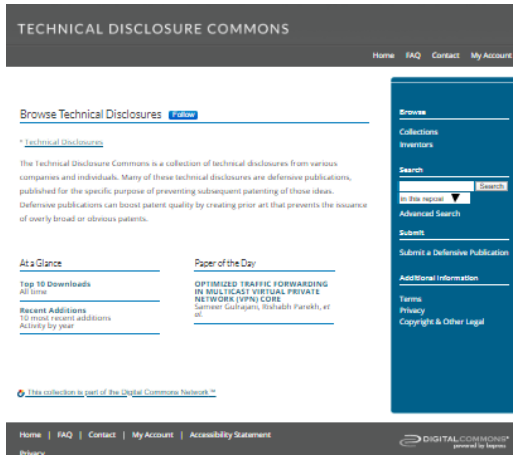
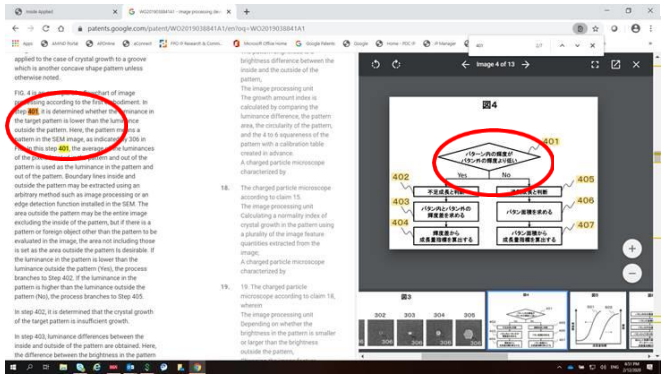
Elevating the bar of Novelty: non-patent publications

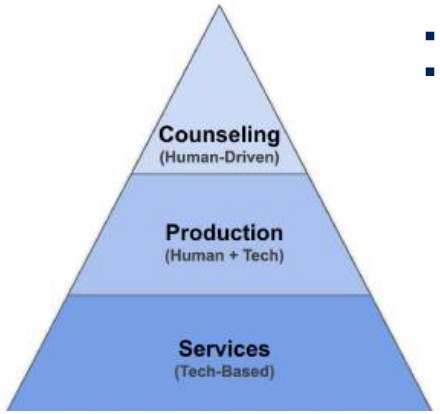


Elevating the bar of Novelty: overcoming language barriers



https://patents.google.com/patent/WO2019038841A1/en?oq=WO2019038841A1

העתיד כבר כאן:



Patent Practice 3.0: New Paradigm, New Tools

Invention intake	BRIGHT MARBLES, Legit, Wellspring, MindMatters Solutions, AppColl
Prior art searching	NLPatent, DOROTHY AI, amplified, ambercite, RESOLUTE patents
Application drafting	Specifio, Draft Builders, HOLLAND&HART, HARRITY, [TurboPatent]
Patent proofreading	Patent Bots, BluePencil BETA, ClaimMaster, LexisNexis PatentOptimizer®
Docketing/reporting	Black Hills IP, helios, CLEARACCESS IP, PATTSY, leapip
IDS prep & mgmt	syncIDS, MAXVAL, smartIDS, IPDAS, Temburi, KTMINE
Prosecution	bigpatentdata, techson, Triangle IP, [SmartShell], IPDataLab
Strategic counseling	CLEARSTONEIP, ANTICIPAT, JURISTAT, PERCEPTION PARTNERS, Patentprufer

* Several companies have offerings spanning multiple categories.

IP Toolbox Approach