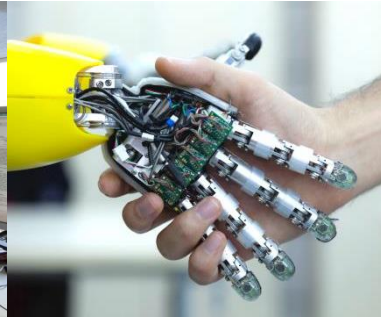




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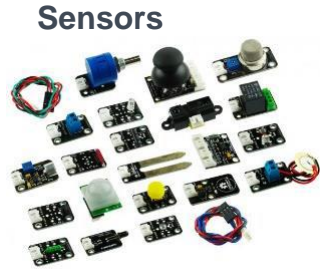
Patents and the 4th Industrial Revolution



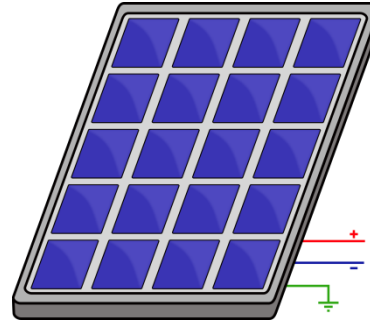
Enabling Technologies for the 4th Industrial Revolution



3D-Printers



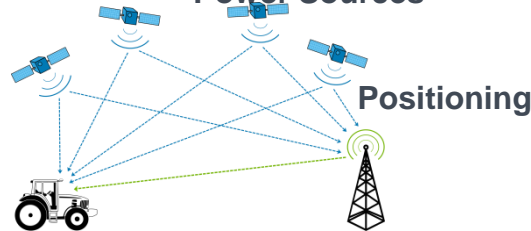
Sensors



Power Sources

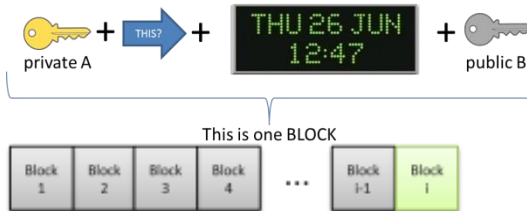


Robots and User Interfaces

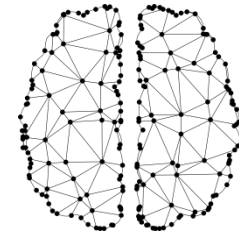


Positioning

Blockchains



Clouds



Artificial Intelligence

Blockchains for Smart Autonomous Objects

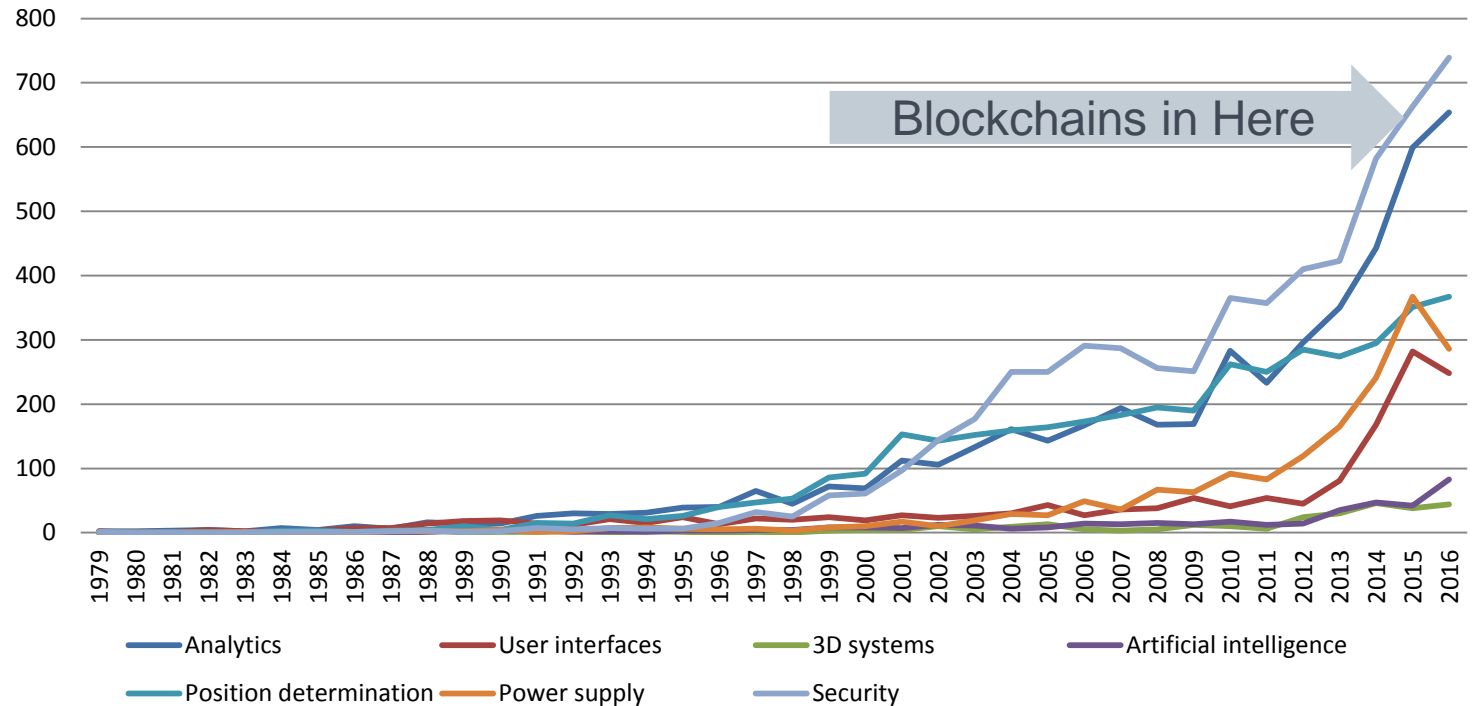
Porsche uses Blockchains for its new All-Electric vehicle:



- Access to car
- Decentralized data storage

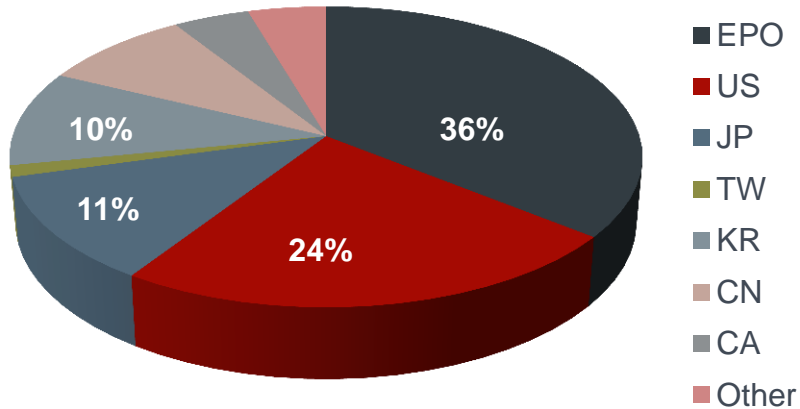
Source: WirtschaftsWoche, 28.2.2018

Patent applications in Enabling Technologies 1990–2016



Source: Patents and the 4th industrial revolution, Study Published by the EPO in Nov. 2017

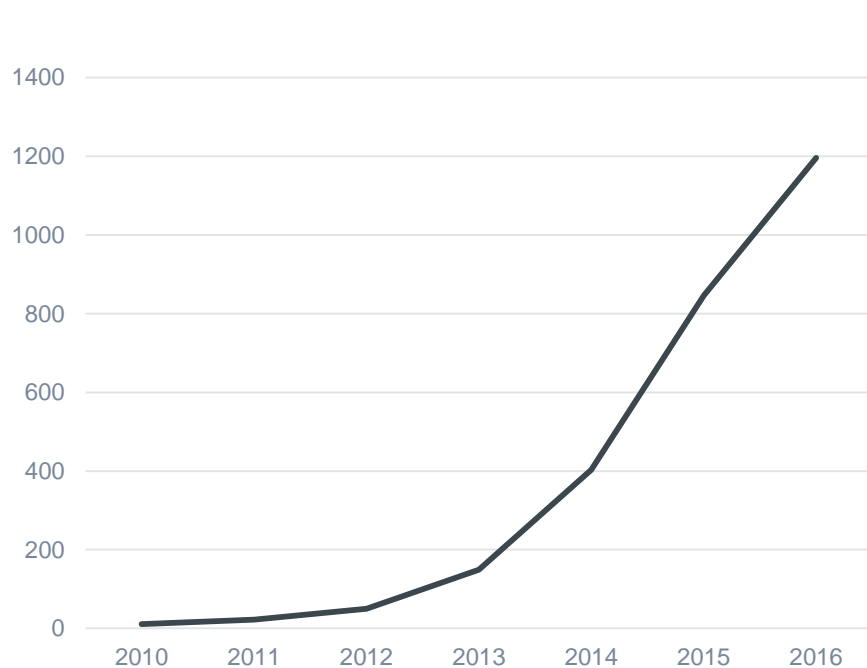
Origin of Security-Related Applications in Enabling Technology Fields



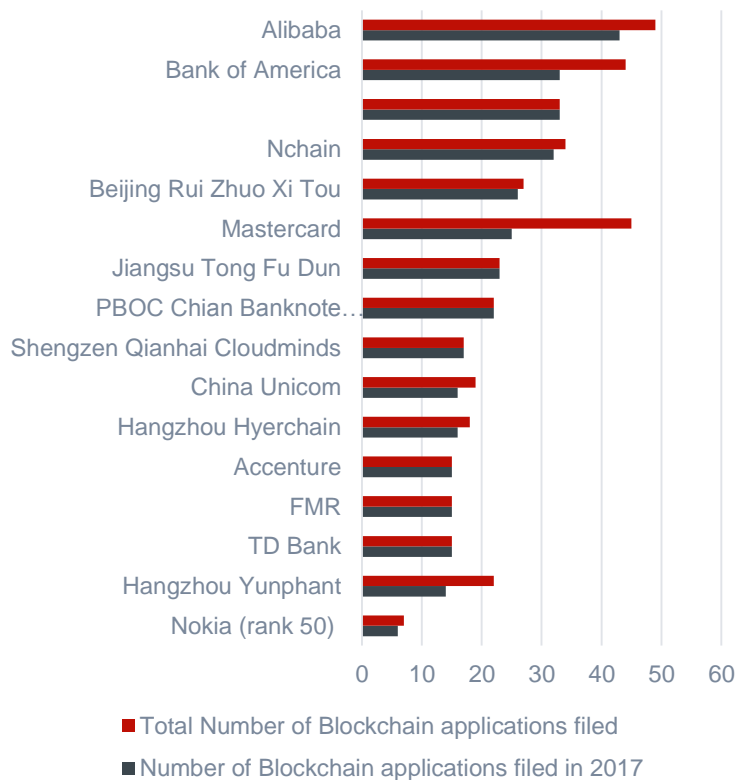
- Data for dates of application between 2011 and 2016
- “Security-Fields”: Enabling the security of data or physical objects

Top applicants in Security field, 2011-2016	
1	SAMSUNG GROUP
2	GEMALTO NV
3	BLACKBERRY LIMITED
4	HUAWEI TECHNOLOGIES CO. LTD.
5	INTEL CORPORATION
6	NOKIA CORPORATION
7	LG GROUP
8	SONY CORPORATION
9	QUALCOMM, INC.
10	ZTE CORPORATION
11	XIAOMI INC.
12	KONINKLIJKE PHILIPS N.V.
13	GIESECKE & DEVRIENT GMBH
14	L M ERICSSON AB
15	TECHNICOLOR SA

Filing trend for Blockchain-Related Inventions



source: Major public patent databases;
searching for blockchain-related concepts



Source: ManagingIP, based on findings from incoPat

Conclusions

“European patent applications related to smart connected objects are rising rapidly, achieving a growth rate of 54% in the last three years.

This far outpaces the overall growth of patent applications in the last three years of 7.65%.”

EPO:Patents and the 4th Industrial Revolution

Blockchains are a part of this!