Tata Consultancy Services : Portfolio Report

Introduction

Tata Consultancy Services Limited (TCS) is an information technology (IT) services provider headquartered in Mumbai, India, and a subsidiary of the Tata Group. It has 67 subsidiaries and operates in 46 countries worldwide. [1]

One of the largest Indian companies and the largest IT services provider, TCS serves various business segments such as manufacturing, BFSI (banking, finance and insurance services), retail and consumer packaged goods (CPG), media and entertainment, telecom, resources and utilities, energy, healthcare and life science, transportation and hospitality, and e-Governance. [2] Its product and service offerings include enterprise software, business process outsourcing, consulting, software management, application development, payment processing, capacity planning, technology education services, and hardware sizing. TCS MasterCraft (IT delivery automation) and TCS BaNCS (banking software suite) are its best-known software products. [1]

In 2013, the TCS brand was placed among the most valuable global IT services brands. Last year, the company was ranked 10th in the Fortune world top 500 IT services providers list. It is the first Indian IT company to reach a market capitalization of US$ 100 billion in April 2018. [1] This report takes a closer look at the patent assets held by TCS that are currently in force. It includes a portfolio taxonomy and provides insights into various aspects of the overall portfolio.

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- Topic Map - Concepts

Sources

1. Tata Consultancy Services (Wikipedia)
2. Tata Consultancy Services (Reuters)

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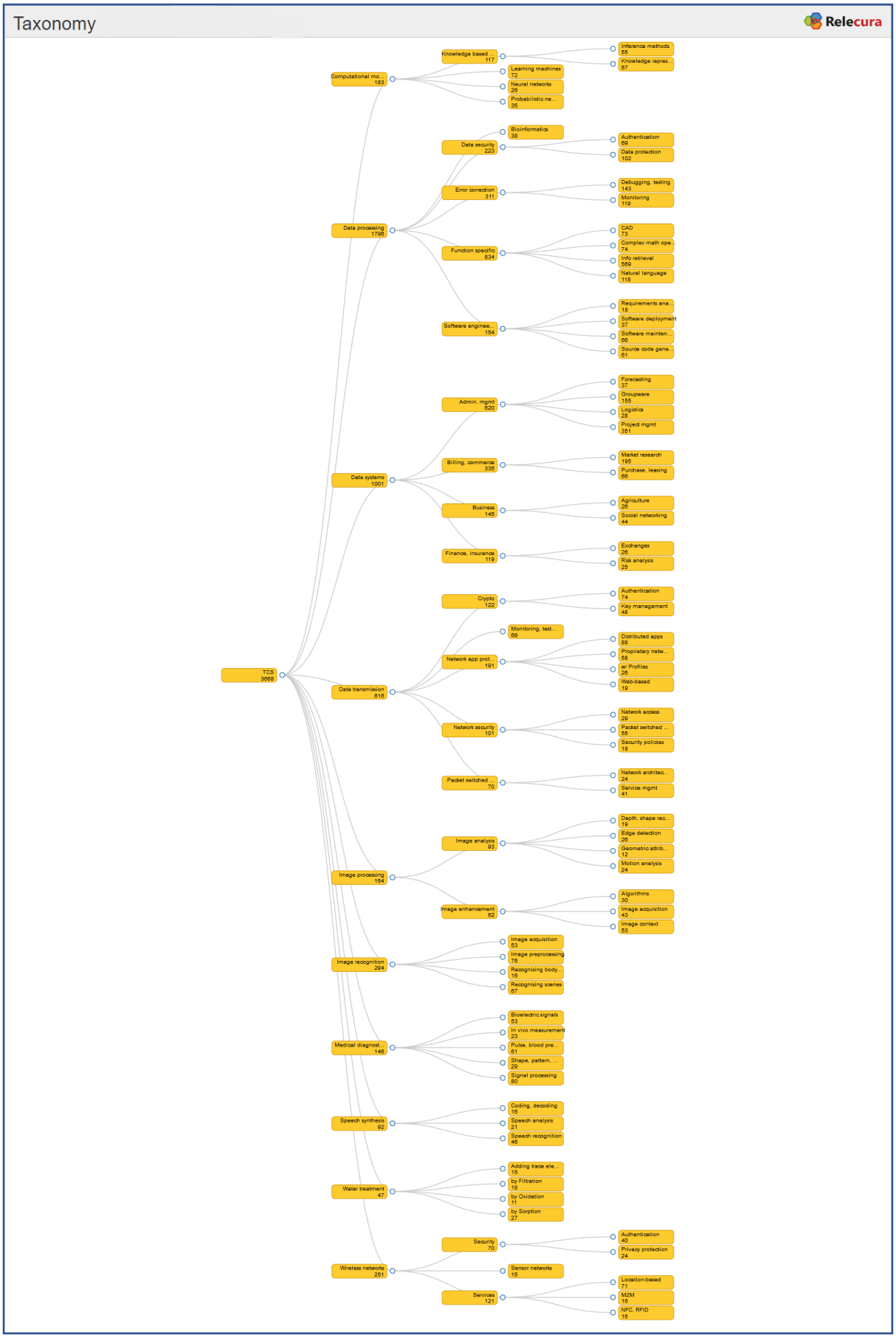
Taxonomy
Relecura
TCS
3668
Computational mo...
183
Knowledge based ...
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Inference methods
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Knowledge repres...
67
Learning machines
72
Neural networks
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Probabilistic ne...
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Data processing
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Bioinformatics
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Data security
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Authentication
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Data protection
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Error correction
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Monitoring
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Complex math ope...
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Proprietary netw...
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Network security
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Network access
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18
Packet switched ...
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Image analysis
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19
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25
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Motion analysis
24
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43
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Image recognition
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Image acquisition
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Image preprocessing
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Recognising body...
18
Recognising scenes
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Medical diagnost...
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Bioelectric signals
53
In vivo measurement
23
Pulse, blood pre...
61
Shape, pattern, ...
29
Signal processing
80
Speech synthesis
92
Coding, decoding
18
Speech analysis
21
Speech recognition
46
Water treatment
47
Adding trace ele...
15
by Filtration
18
by Oxidation
11
by Sorption
27
Wireless networks
261
Security
70
Authentication
40
Privacy protection
24
Sensor networks
15
Services
121
Location-based
71
M2M
18
NFC, RFID
16

Summary

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TOTAL DOCUMENTS COUNT (APPLICATIONS)

3,668

PUBLICATION TYPES

3,325 | 257

Applications | Grants

IP TYPES

3,625 | 9 | 3

Invention | Design | Model

PATENT BY STAR RATING

1.81

★★★★★	0
★★★★☆	8
★★★☆☆	416
★★☆☆☆	2,121
★☆☆☆☆	1,123

Peak Year of Activity

2015 (818)

No of technologies (175)

Top Active Jurisdiction

IN (1,542)

Top Rated

US9486074B2 (4)

Top Cited

US20030084424A1 (148)

Portfolio Trends

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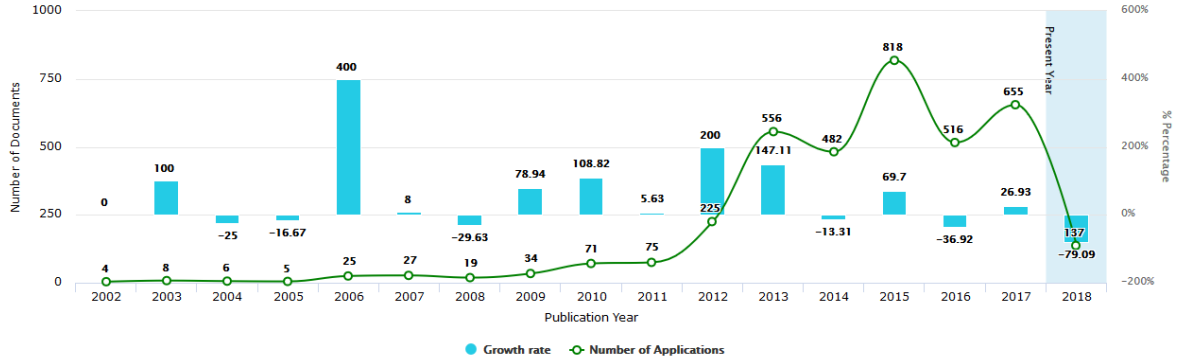

Key Geographies

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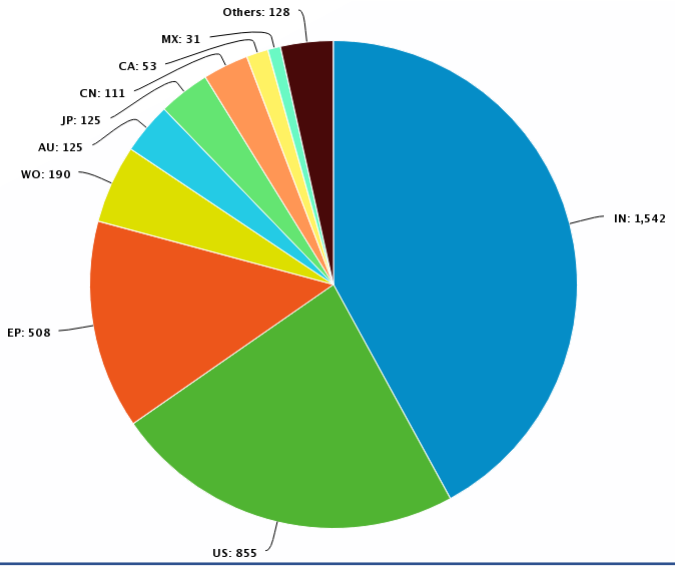
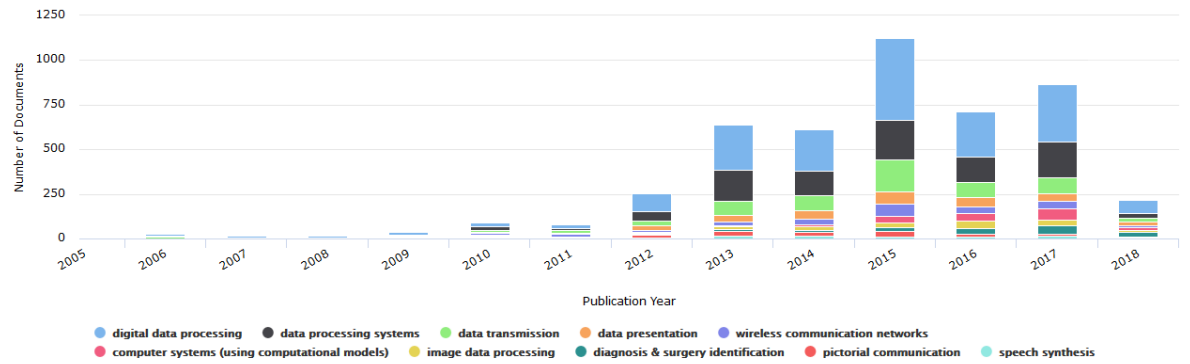


Key Technologies

Technologies	# Applications
Function specific digital computer	821
Data processing in relation to administration and management	618
Program control unit	334
Data processing adapted for billing, commerce or marketing	333
Error detection or correction and monitoring computing systems	306
Reading or recognising printed or written characters	287
Arrangements, apparatus, circuits or systems for digital transmission	224
Data security and security of computers and components	221
Communication protocols supporting network applications	191

Evolution of Key Technologies



Analysis of Key Technologies

Technologies	Applications	Grants	Sub Technologies	Geographies
digital data processing	1633	123	function specific digital computer (828) , program control unit (336) , error detection or correction and monitoring computing systems (309) , data processing in relation to administration and management (284) , data security and security of computers and components (223)	IN (717) , US (453) , EP (263) , WO (77) , AU (71)
data processing systems	945	39	data processing in relation to administration and management (618) , data processing adapted for billing, commerce or marketing (333) , function specific digital computer (225) , data processing adapted for business sector (144) , data processing adapted for finance, insurance, tax strategies (118)	IN (306) , US (296) , EP (173) , AU (58) , WO (38)
data transmission	540	50	arrangements, apparatus, circuits or systems for digital transmission (231) , communication protocols supporting network applications (191) , data switching networks (165) , cryptographics for secret digital communication (121) , data processing in relation to administration and management (103)	IN (167) , US (157) , EP (102) , WO (46) , CN (38)
data presentation	265	34	reading or recognising printed or written characters (294) , image analysis (68) , function specific digital computer (48) , image analysis or enhancement (45) , medical diagnostics (33)	IN (85) , US (79) , EP (64) , WO (29) , JP (24)
wireless communication networks	211	27	providing wireless communication services to user via network (120) , security arrangements, authentication, protecting privacy for wireless communication (70) , communication protocols supporting network applications (56) , arrangements, apparatus, circuits or systems for digital transmission (55) , cryptographics for secret digital communication (44)	IN (63) , US (57) , EP (45) , WO (22) , CN (16)

Patent Quality by sub-technologies (Star Rating)

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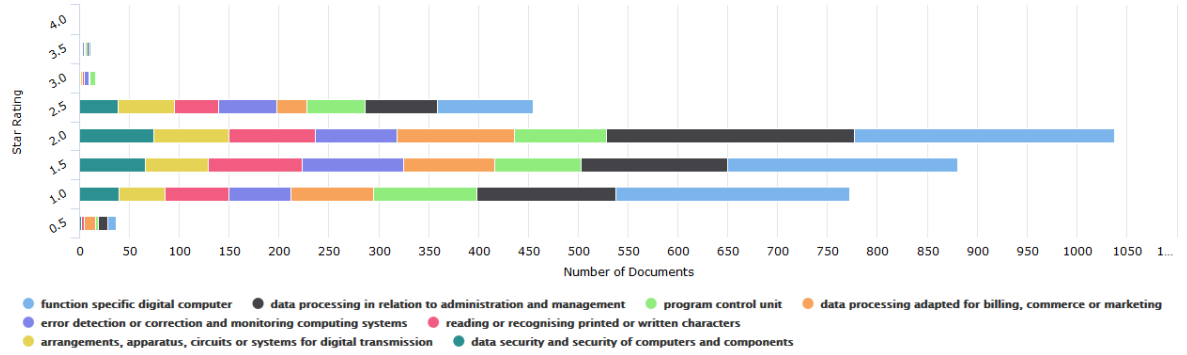

Key Patents in portfolio

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Publicaton No.	Title	Inventor	Filing Date	Star Rating	#Fwd Citations
US9486074B2	Enclosure for biometric sensor	Shalin Garg, Vibhor Goswami, Sathish Vallat, Natarajan Ganapathy Subramaniam	2012-12-26	4.0	51
USD759061S1	Display screen or a portion thereof with animated graphical user interface	Nikhil Sahoo, Annie Thomas, Harini Ramachandraiah, Anushka Soman, Shalin Garg, Sathish Vallat	2015-03-11	3.5	30
US6904588B2	Pattern-based comparison and merging of model versions	Sreedhar Sannareddy Reddy, Josyula Ramakrishna	2002-01-28	3.5	148
US9306905B2	Secure access to application servers using out-of-band communication	Prasanna Bidare	2012-12-15	3.5	40
US20140359552A1	Computer Platform for Development and Deployment of Sensor Data Based Applications and Services	Prateep Misra, Arpan Pal, Balamuralidhar Purushothaman, Chirabrata Bhaumik, Deepak Swamy, Venkatramanan Siva Subrahmanian, Debnarayan Kar, Soumitra Naskar, Sumanta Ghosh, Suman Adak	2012-09-18	3.5	36

Top Forward Citing Assignees

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FC Assignees	# Applications
IBM	131
MICROSOFT	56
BANK OF AMERICA	29
SAMSUNG	28
SAP	28
GOOGLE	25
AMAZON	21
FUJITSU	21
WIPRO LTD	21

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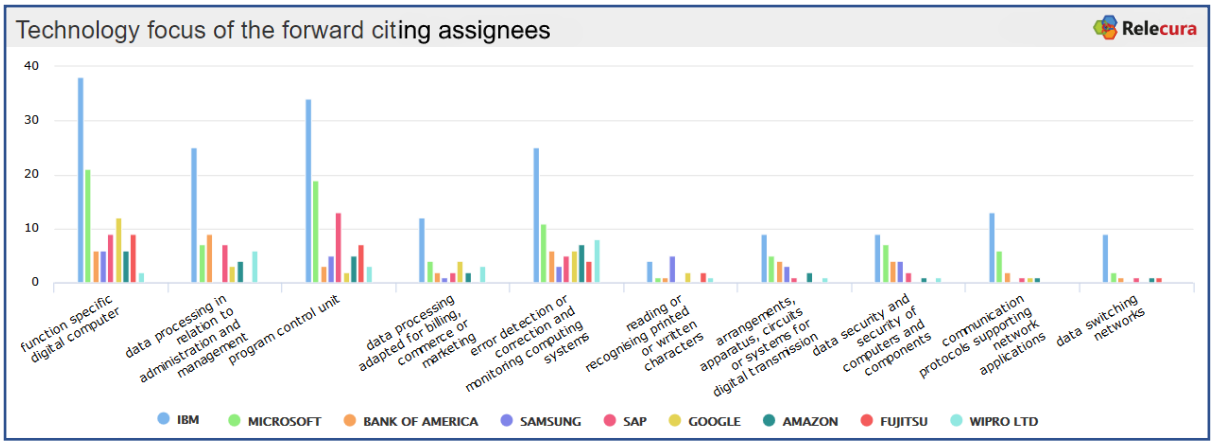
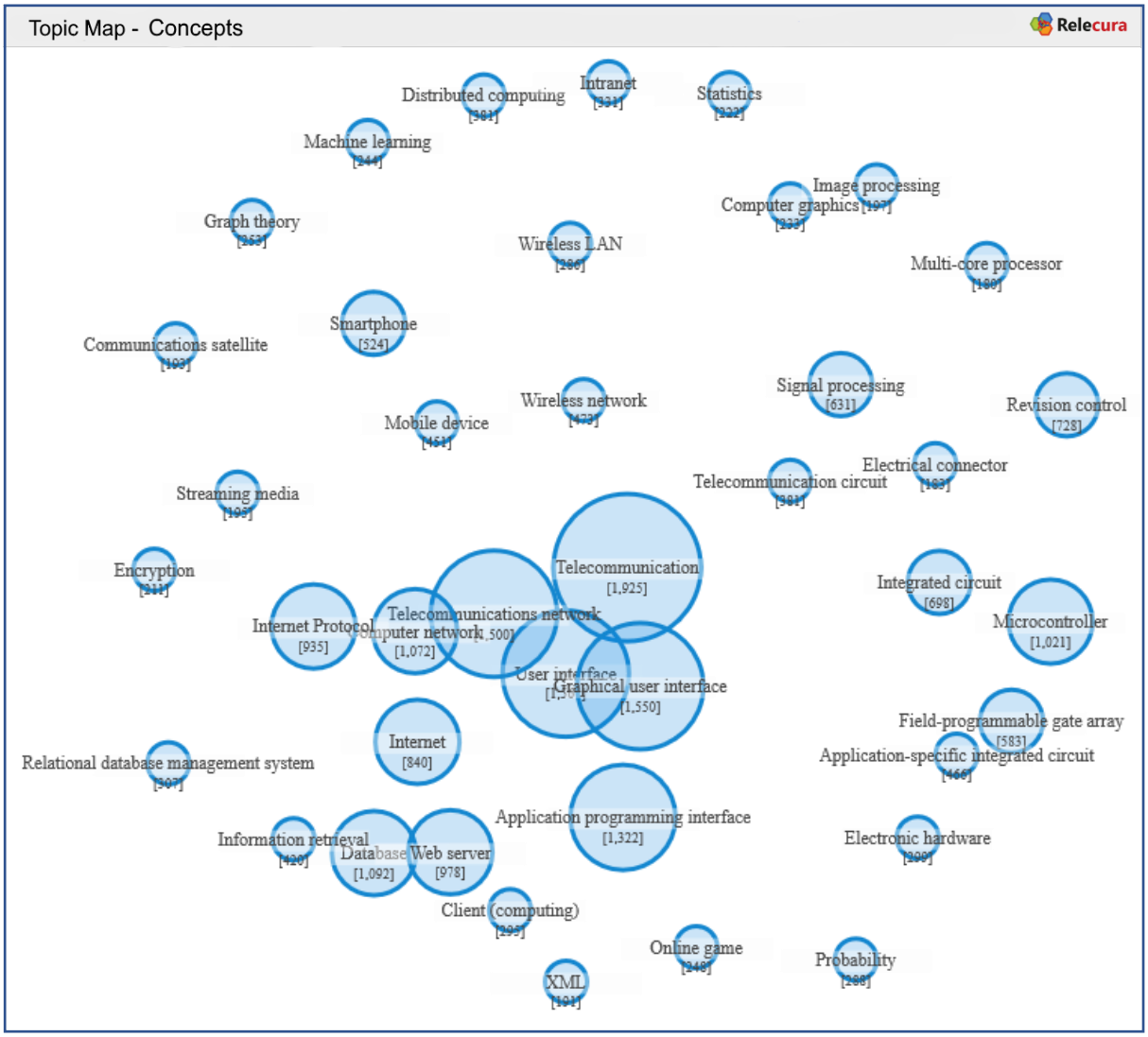

Technology focus of the forward citing assignees
Relecura
40
30
20
10
0
function specific digital computer
data processing in relation to administration and management
program control unit
data processing adapted for billing, commerce or marketing
error detection or correction and monitoring computing systems
reading or recognising printed or written characters
arrangements, apparatus, circuits or systems for digital transmission
data security and security of computers and components
communication protocols supporting network applications
data switching networks
IBM
MICROSOFT
BANK OF AMERICA
SAMSUNG
SAP
GOOGLE
AMAZON
FUJITSU
WIPRO LTD


Topic Map - Concepts
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Distributed computing [361]
Intranet [331]
Statistics [322]
Machine learning [344]
Image processing [197]
Computer graphics [233]
Graph theory [252]
Wireless LAN [286]
Multi-core processor [188]
Smartphone [524]
Communications satellite [103]
Signal processing [631]
Revision control [728]
Wireless network [478]
Mobile device [451]
Electrical connector [163]
Telecommunication circuit [381]
Streaming media [195]
Encryption [211]
Telecommunication [1,925]
Integrated circuit [698]
Internet Protocol [935]
Telecommunications network [1,072]
Computer network [1,500]
Microcontroller [1,021]
User interface [1,500]
Graphical user interface [1,550]
Field-programmable gate array [583]
Internet [840]
Relational database management system [507]
Application-specific integrated circuit [466]
Application programming interface [1,322]
Information retrieval [420]
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Web server [978]
Electronic hardware [309]
Client (computing) [293]
Online game [348]
Probability [288]
XML [401]

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