

Nuance Communications : Portfolio Report

Introduction

Nuance Communications is a voice recognition and natural language processing technology company. Founded in 1992, the company is headquartered in Burlington, Massachusetts. Nuance provides capabilities for natural language understanding, dialog and information management, biometric speaker authentication, text-to-speech, and optical character recognition (OCR). It operates through four industry segments - Healthcare, Mobile, Enterprise and Imaging. ^[1]

Speech recognition has evolved from mere understanding of words to semantic parsing of conversations and contextual response to dialogs. Nuance recently acquired Voicebox Technologies to expand its voice assistant capabilities. Voicebox is known for its VoiceAI platform that delivers a multi-person, cross-device experience. The platform is used with IoT devices and connected cars. ^[2]

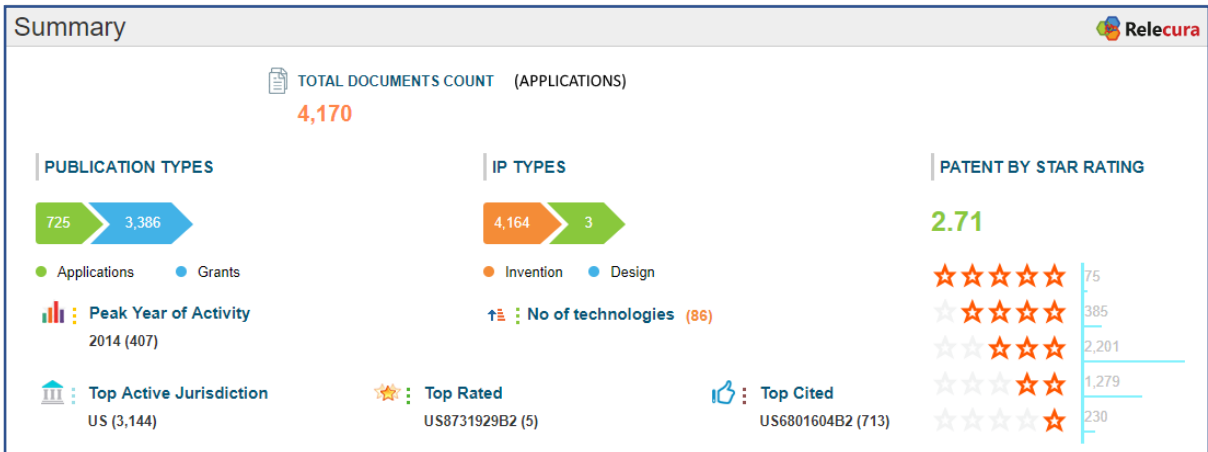
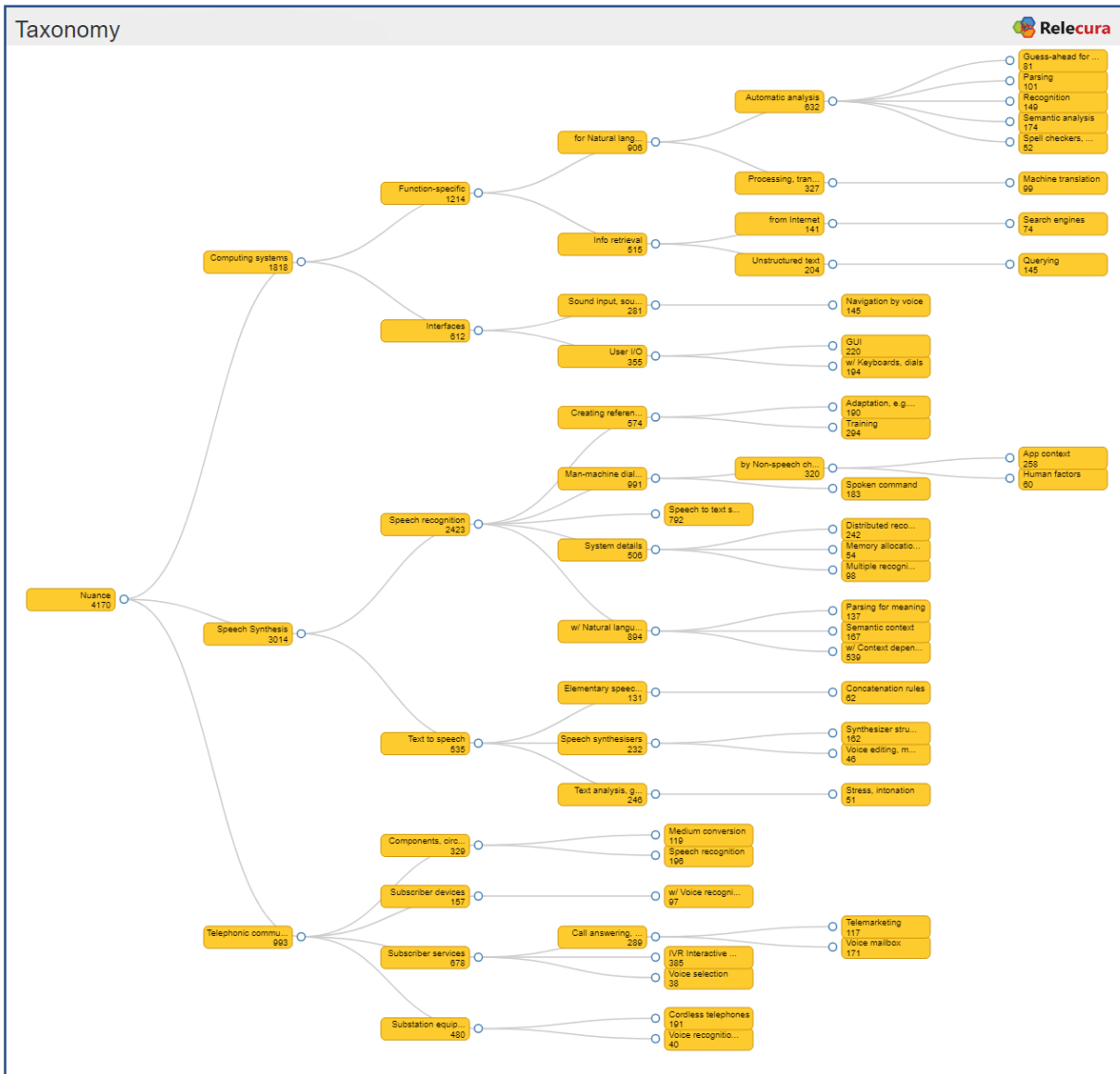
Nuance, the tech force behind Apple Siri, is a [leader in speech recognition, despite large players being present in the sector](#). A combination of homegrown R&D and acquisitions has resulted in a strong portfolio of voice technology patents. This report analyzes the patent assets held by Nuance Communications and provides insights into various aspects of the overall portfolio.

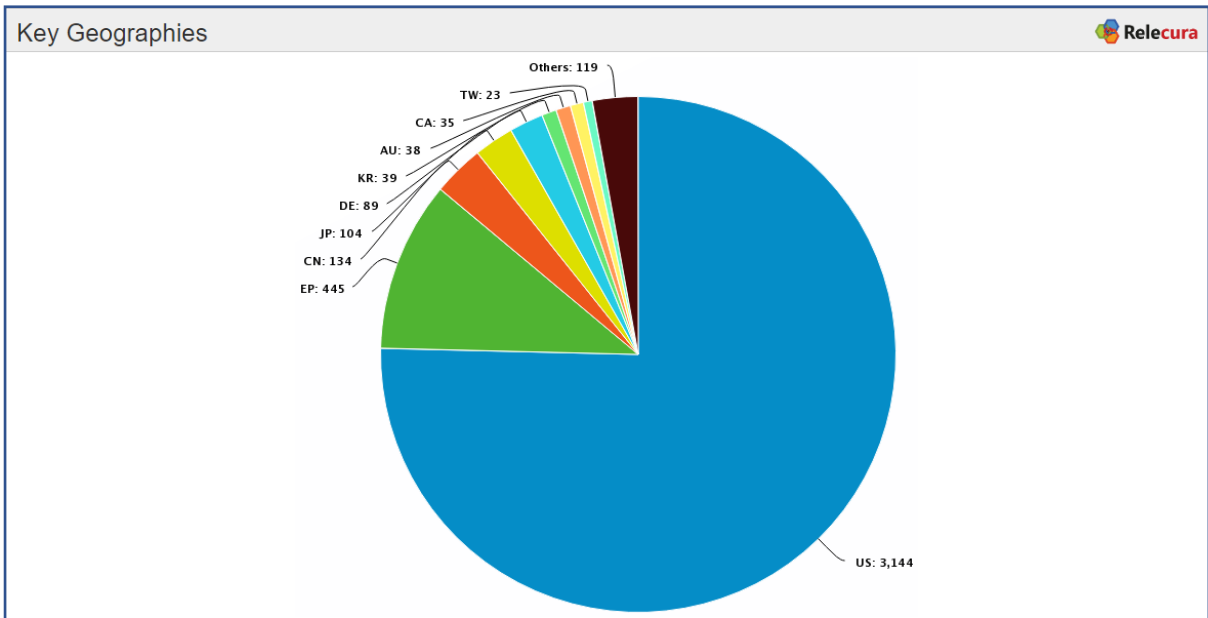
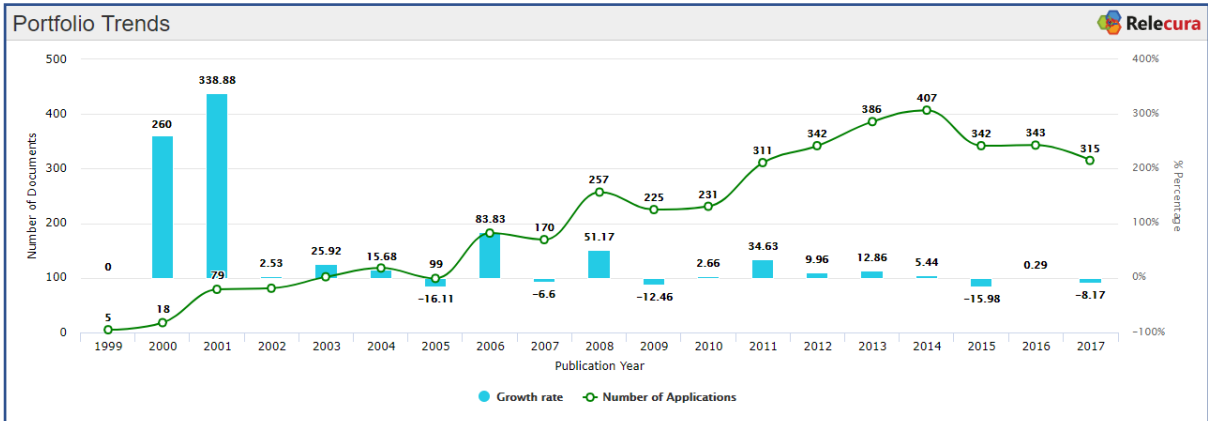
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Sources

- [1] [Nuance Communications](#) (Wikipedia.org)
[2] [Nuance buys Voicebox Technologies](#) (geekwire.com)



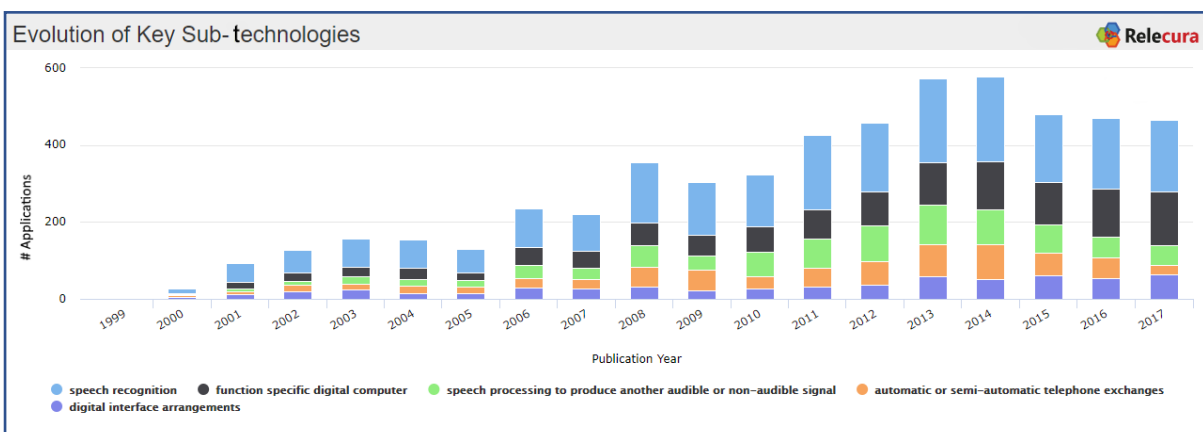


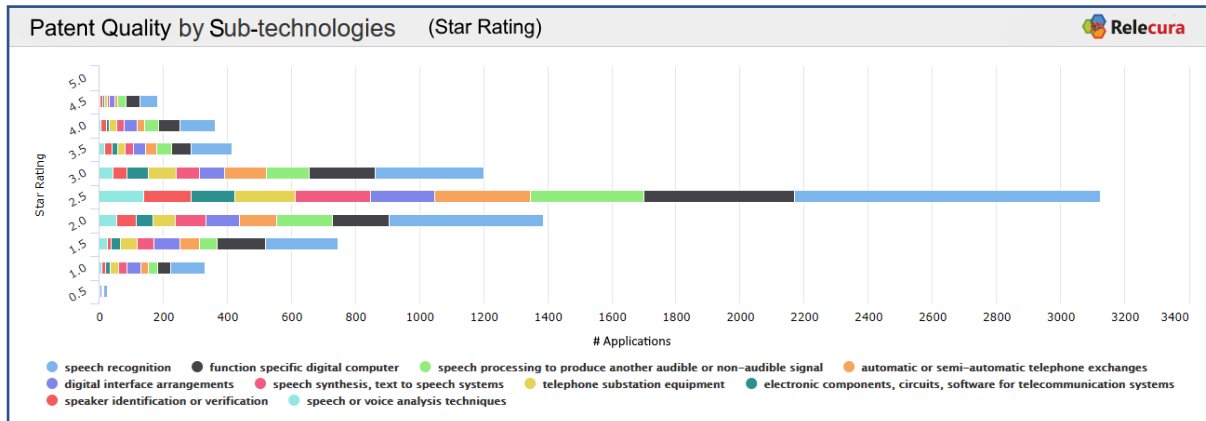
Key Technologies

Technologies	# Applications
Speech synthesis	3014
Digital data processing	1818
Telephonic communication	993
Data transmission	310
Data processing systems	301
Wireless communication networks	245
Speakers, microphones & acoustic transducers	168
Data presentation	130
Pictorial communication	116

Analysis of Key Technologies				Relecura
Technologies	Applications	Grants	Sub Technologies	Geographies
speech synthesis	445	2531	speech recognition (2423) , speech processing to produce another audible or non-audible signal (859) , function specific digital computer (730) , speech synthesis, text to speech systems (534) , automatic or semi-automatic telephone exchanges (425)	US (2318) , EP (308) , CN (84) , DE (71) , JP (71)
digital data processing	419	1365	function specific digital computer (1214) , speech recognition (959) , digital interface arrangements (611) , speech processing to produce another audible or non-audible signal (262) , automatic or semi-automatic telephone exchanges (247)	US (1386) , EP (184) , CN (75) , JP (45) , DE (22)
telephonic communication	130	846	automatic or semi-automatic telephone exchanges (702) , speech recognition (488) , telephone substation equipment (480) , electronic components, circuits, software for telecommunication systems (329) , function specific digital computer (217)	US (762) , EP (100) , JP (26) , CN (17) , AU (14)
data transmission	65	236	speech recognition (128) , arrangements, apparatus, circuits or systems for digital transmission (124) , automatic or semi-automatic telephone exchanges (115) , communication protocols supporting network applications (110) , telephone substation equipment (104)	US (233) , EP (33) , JP (9) , CN (8) , CA (6)
data processing systems	111	184	speech recognition (151) , data processing adapted for billing, commerce or marketing (144) , function specific digital computer (110) , data processing in relation to administration and management (108) , data processing adapted for business sector (87)	US (221) , EP (36) , CN (18) , AU (6) , JP (6)

Key Sub-technologies		Relecura
Sub-technologies	# Applications	
Speech recognition	2423	
Function specific digital computer	1214	
Speech processing to produce another audible or non-audible signal	859	
Automatic or semi-automatic telephone exchanges	702	
Digital interface arrangements	611	
Speech synthesis, text to speech systems	534	
Telephone substation equipment	480	
Electronic components, circuits, software for telecommunication systems	329	
Speaker identification or verification	329	



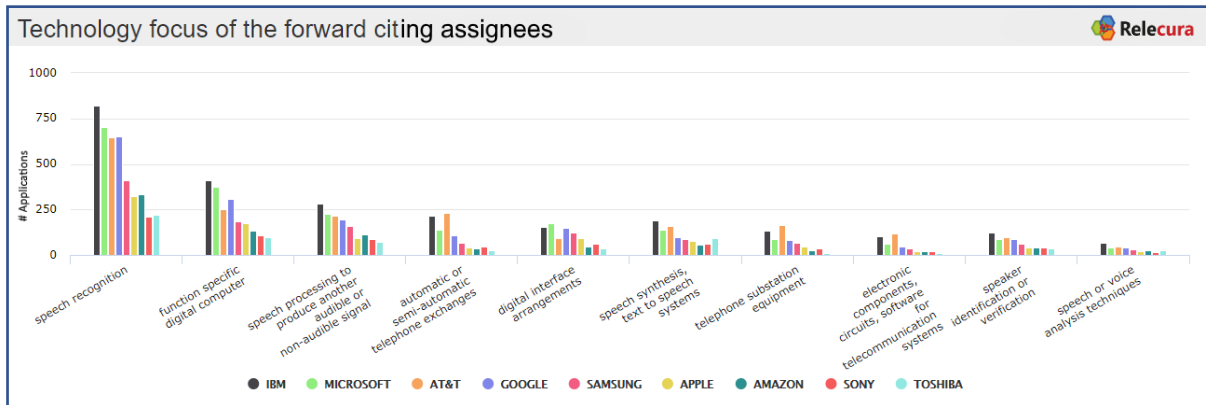


Key Patents

Publication No.	Title	Inventor	Filing Date	Star Rating	#Fwd Citations
US8731929B2	Agent architecture for determining meanings of natural language utterances	Robert A. Kennewick, David Locke, Michael R. Kennewick, Sr., Michael R. Kennewick, Jr., Richard Kennewick, Tom Freeman	2009-02-04	5.0	213
US8140335B2	System and method for providing a natural language voice user interface in an integrated voice navigation services environment	Michael R. Kennewick, Catherine Cheung, Larry Baldwin, Ari Salomon, Michael Tjalve, Sheetal Guttigoli, Lynn Armstrong, Philippe Di Cristo, Bernie Zimmerman, Sam Menaker	2007-12-11	5.0	346
US9171541B2	System and method for hybrid processing in a natural language voice services environment	Robert A. Kennewick, Lynn Elise Armstrong	2010-02-09	4.5	202
US7880730B2	Keyboard system with automatic correction	B. Alex Robinson, Michael R. Longe, David Jon Kay, Gordon Robert Waddell	2007-09-11	4.5	124
US7949529B2	Mobile systems and methods of supporting natural language human-machine interactions	Chris Weider, Richard Kennewick, Mike Kennewick, Philippe Di Cristo, Robert A. Kennewick, Samuel Menaker, Lynn Elise Armstrong	2005-08-29	4.5	612

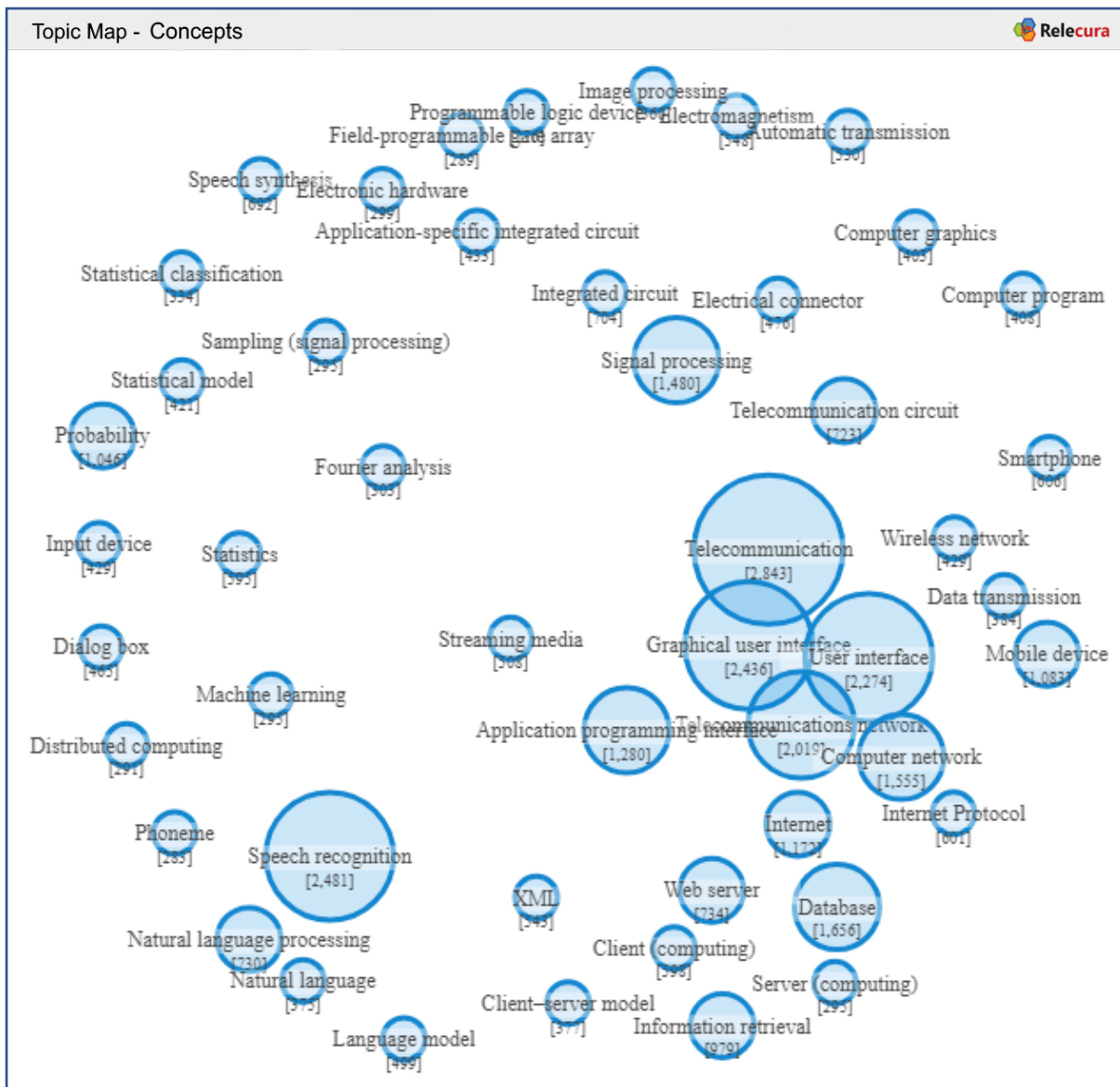
Top Forward Citing Assignees

FC Assignee	# Applications
IBM	1238
MICROSOFT	1091
AT&T	943
GOOGLE	935
SAMSUNG	632
APPLE	475
AMAZON	417
SONY	342
TOSHIBA	335



Key Acquisitions

Transfer from	# Applications	Technologies
IBM	829	speech synthesis (732), digital data processing (306), telephonic communication (162), data transmission (45), greentech - others (26)
AT&T	792	speech synthesis (650), telephonic communication (316), digital data processing (313), wireless communication networks (88), data transmission (77)
PHILIPS	77	speech synthesis (75), digital data processing (50), telephonic communication (6), data presentation (3), data processing systems (3)
HARMAN INTERNATIONAL	69	speech synthesis (56), speakers, microphones & acoustic transducers (34), telephonic communication (25), signal transmission (21), digital data processing (6)
DICTAPHONE	66	digital data processing (46), speech synthesis (39), data processing systems (16), information storage (11), telephonic communication (9)



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