

# Nvidia Corporation : Portfolio Report

## Introduction

Founded in 1993 and headquartered in Santa Clara, California, Nvidia Corporation is an American technology company that is primarily known for designing and manufacturing graphical processing units (GPUs) for the gaming industry. In addition to gaming, the company's product line addresses markets such as professional visualization, data center, automotive, and recently, artificial intelligence. <sup>[1]</sup>

Nvidia GPUs have parallel computing capabilities that can efficiently run high performance applications. As a result, they are now being used in artificial intelligence and deep learning systems to approach challenges such as weather prediction, self-driving vehicles, and cancer detection. <sup>[1]</sup>

Nvidia also manufactures the Tegra system on a chip (SOC) processor that integrates an entire computer onto a single chip and incorporates multi-core central processing units (CPUs) and GPUs. The Tegra processor is used in devices such as smartphones, tablets, digital assistants, entertainment systems, vehicle navigation systems, autonomous robots, and drones. <sup>[1][2]</sup>

The major GPU product brands of the company are GeForce for gamers; GRID for cloud-based visual computing users; Tesla and DGX for AI data scientists and big data researchers; and Quadro for designers. <sup>[2]</sup>

This report takes a closer look at the patents in Nvidia's portfolio that are currently in force. It includes a portfolio taxonomy and provides insights into various aspects of the overall portfolio.

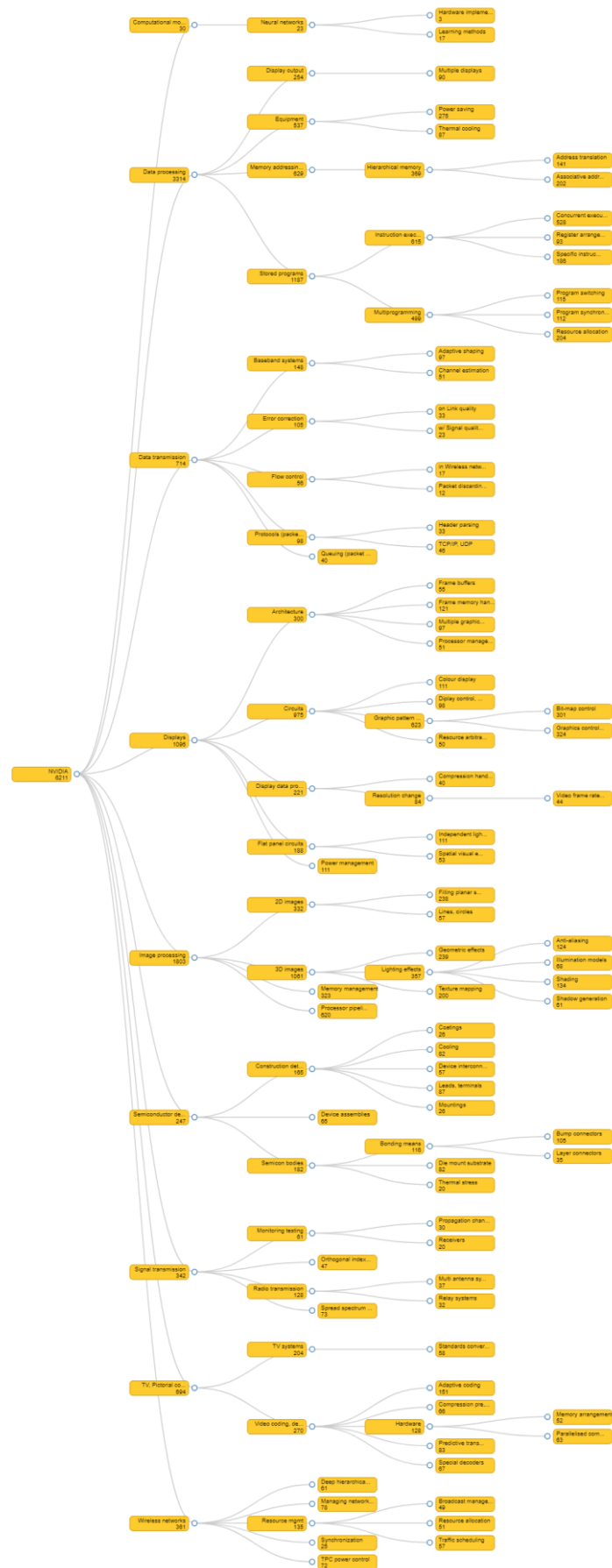
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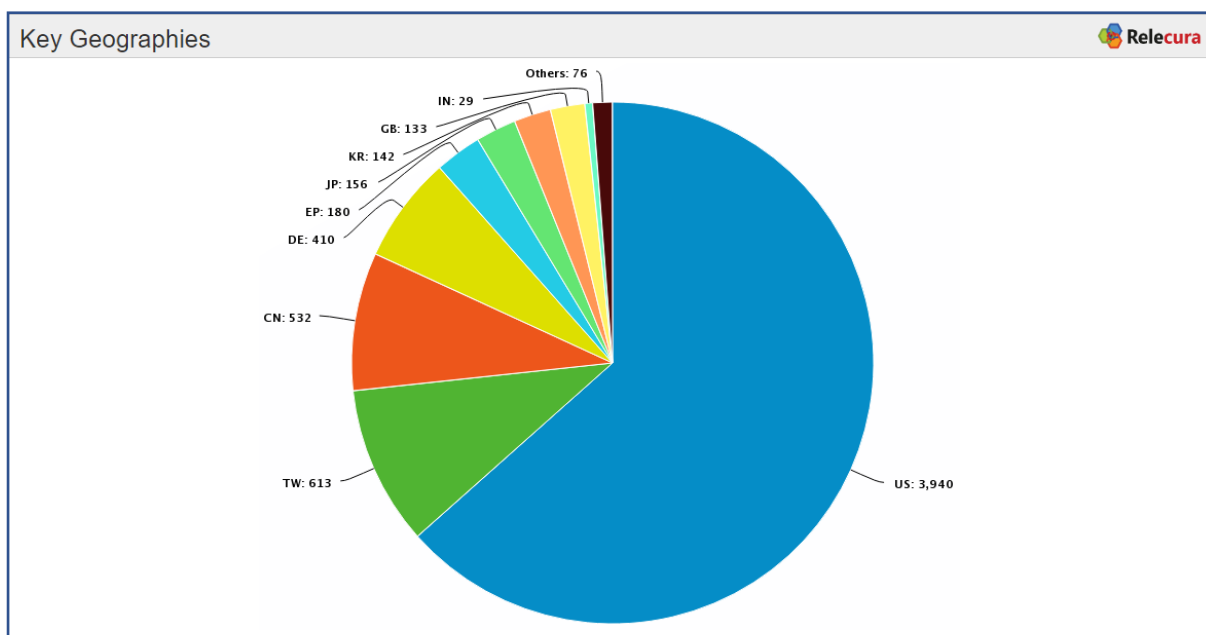
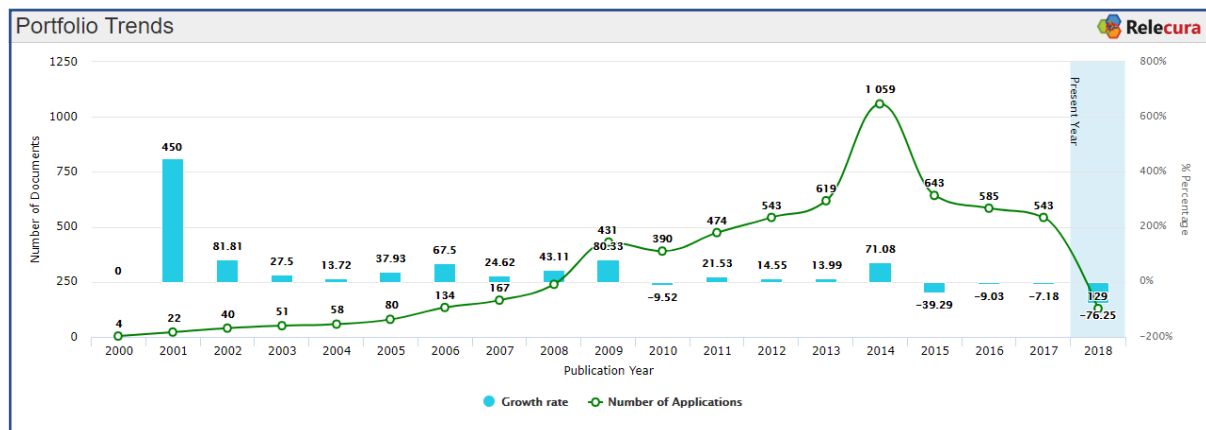
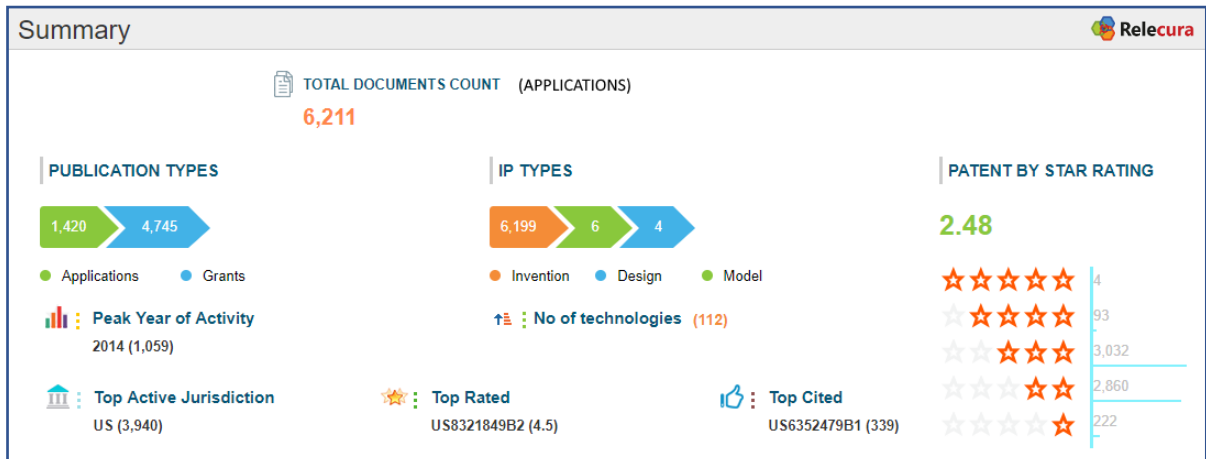
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## Sources


- [1. Nvidia \(Wikipedia\)](#)
- [2. Nvidia Corp \(Reuters\)](#)


Taxonomy

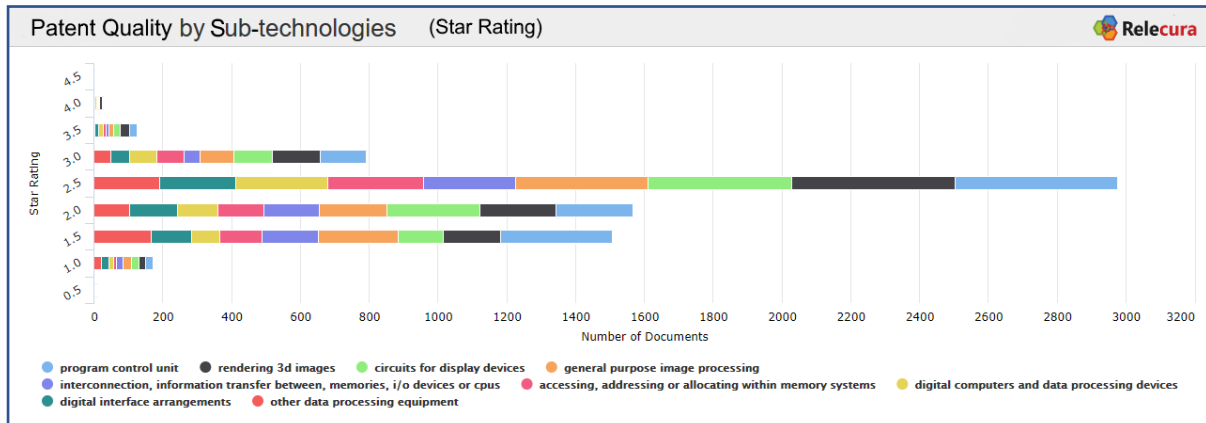
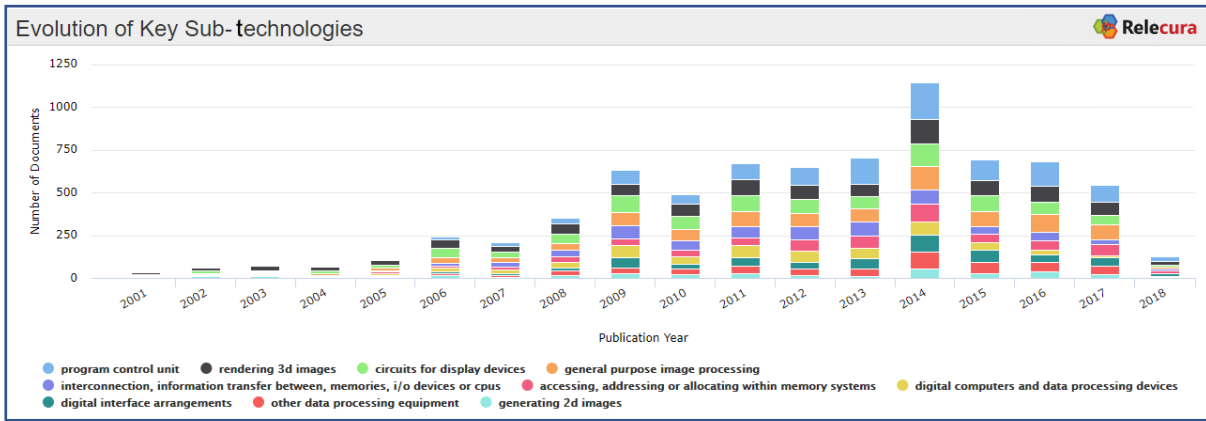




Key Technologies		
Technologies	# Applications	
Digital data processing	3,313	
Image data processing	1,803	
Displays (circuits)	1,096	
Data transmission	714	
Pictorial communication	693	
Wireless communication networks	361	
Signal transmission	341	
Semiconductor devices	247	
Static memory	205	

Key Sub-technologies		
Sub-technologies	# Applications	
Program control unit	1,199	
Rendering 3D images	1,061	
Circuits for display devices	975	
General purpose image processing	956	
Interconnection, information transfer between, memories, I/O devices or CPUs	672	
Accessing, addressing or allocating within memory systems	631	
Digital computers and data processing devices	578	
Digital interface arrangements	565	
Other data processing equipment	537	

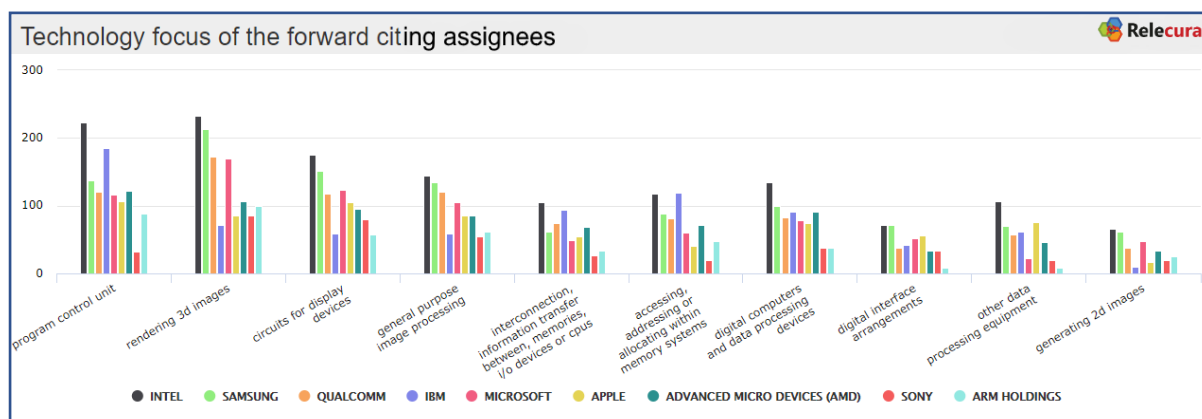
Analysis of Key Technologies				
Technologies	Applications	Grants	Sub Technologies	Geographies
digital data processing	723	2572	program control unit (1199), interconnection, information transfer between, memories, i/o devices or cpus (672), accessing, addressing or allocating within memory systems (631), general purpose image processing (587), digital computers and data processing devices (579)	US (2181), TW (347), CN (289), DE (197), KR (81)
image data processing	320	1464	rendering 3d images (1061), general purpose image processing (956), circuits for display devices (654), generating 2d images (332), program control unit (294)	US (1300), TW (152), CN (110), DE (76), KR (50)
displays(circuits)	156	930	circuits for display devices (975), rendering 3d images (413), general purpose image processing (393), architecture of display device (300), digital interface arrangements (267)	US (827), TW (69), CN (64), DE (37), KR (28)
data transmission	162	550	data switching networks (216), arrangements, apparatus, circuits or systems for digital transmission (184), baseband systems (148), error correction or detection in digital information (105), protocol aspects or techniques in packet data networks (98)	US (353), CN (72), TW (68), DE (63), EP (49)
pictorial communication	178	508	coding, decoding, compressing or decompressing digital video signals (270), hardware or software aspects of tv signals (211), tv systems (194), circuits for display devices (130), stereoscopic tvs (114)	US (433), TW (68), CN (67), KR (34), DE (31)



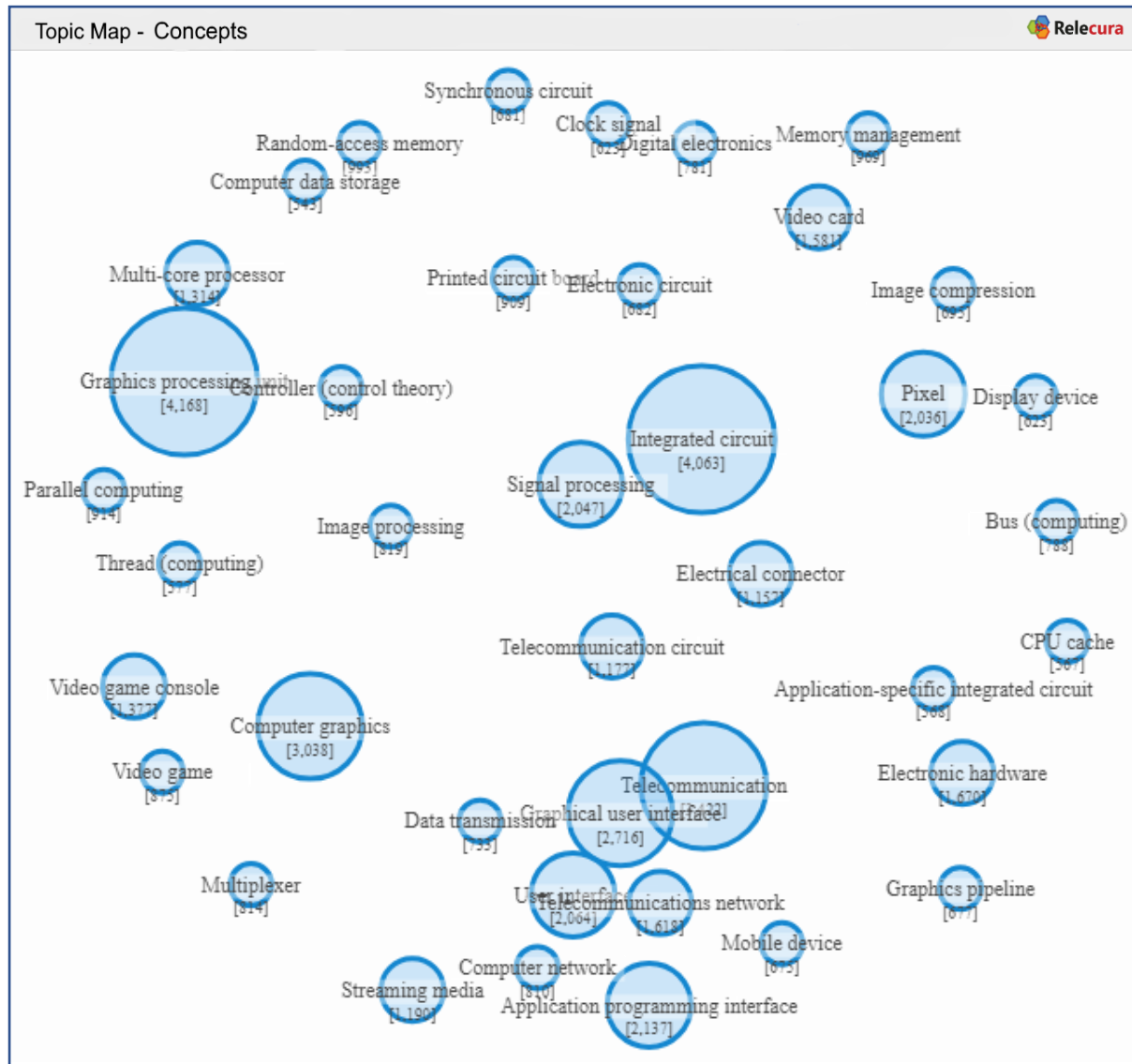
### Key Patents

Publication No.	Title	Inventor	Filing Date	Star Rating	#Fwd Citations
US7912471B2	Initial connection establishment in a wireless communication system	Chandrika K. Kodikara Patabandi, Nicholas William Anderson	2006-01-11	4.5	121
US8321849B2	Virtual architecture and instruction set for parallel thread computing	John R. Nickolls, Henry P. Moreton, Lars S. Nyland, Ian A. Buck, Richard C. Johnson, Robert S. Glanville, Jayant B. Kolhe	2007-01-26	4.5	107
US9870375B2	Image analysis of display content for dynamic adjustment of a continuous scan display	David Wyatt, Ratn Kumar, Timothy Bornemisza	2013-12-20	4.5	57
US9830158B2	Speculative execution and rollback	Jack Hilaire Choquette, Olivier Giroux, Robert J. Stoll, Xiaogang Qiu	2011-11-04	4.5	64
US7868891B2	Load balancing	Daniel Elliot Wexler, Larry I. Gritz, Eric B. Enderton, Cass W. Everitt	2005-09-16	4.0	106

Top Forward Citing Assignees	
<b>FC Assignees</b>	<b># Applications</b>
INTEL	843
SAMSUNG	711
QUALCOMM	639
IBM	553
MICROSOFT	497
APPLE	403
ADVANCED MICRO DEVICES (AMD)	396
SONY	265
ARM HOLDINGS	246



Key Acquisitions		
<b>Transfer from</b>	<b># Applications</b>	<b>Technologies</b>
IPWIRELESS	83	wireless communication networks (68), data transmission (61), signal transmission (32), multiplex communication (18), communication switches & relays (7)
PORTALPLAYER INC	30	digital data processing (15), coders & decoders (7), pictorial communication (5), data transmission (3), displays (circuits) (3)
VC WORLDWIDE LTD	29	wireless communication networks (39), data transmission (33), signal transmission (22), multiplex communication (13), broadcast communication (4)
IREADY CORPORATION	20	data transmission (16), digital data processing (15), telephonic communication (3), multiplex communication (2), coders & decoders (1)
AGEIA TECHNOLOGIES INC	17	digital data processing (14), image data processing (6), analogue computers (4), sports apparatus - indoor games (4), displays (circuits) (1)



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