



REUTERS/Yuriko Nakao

专利分析的法门

张丹丹

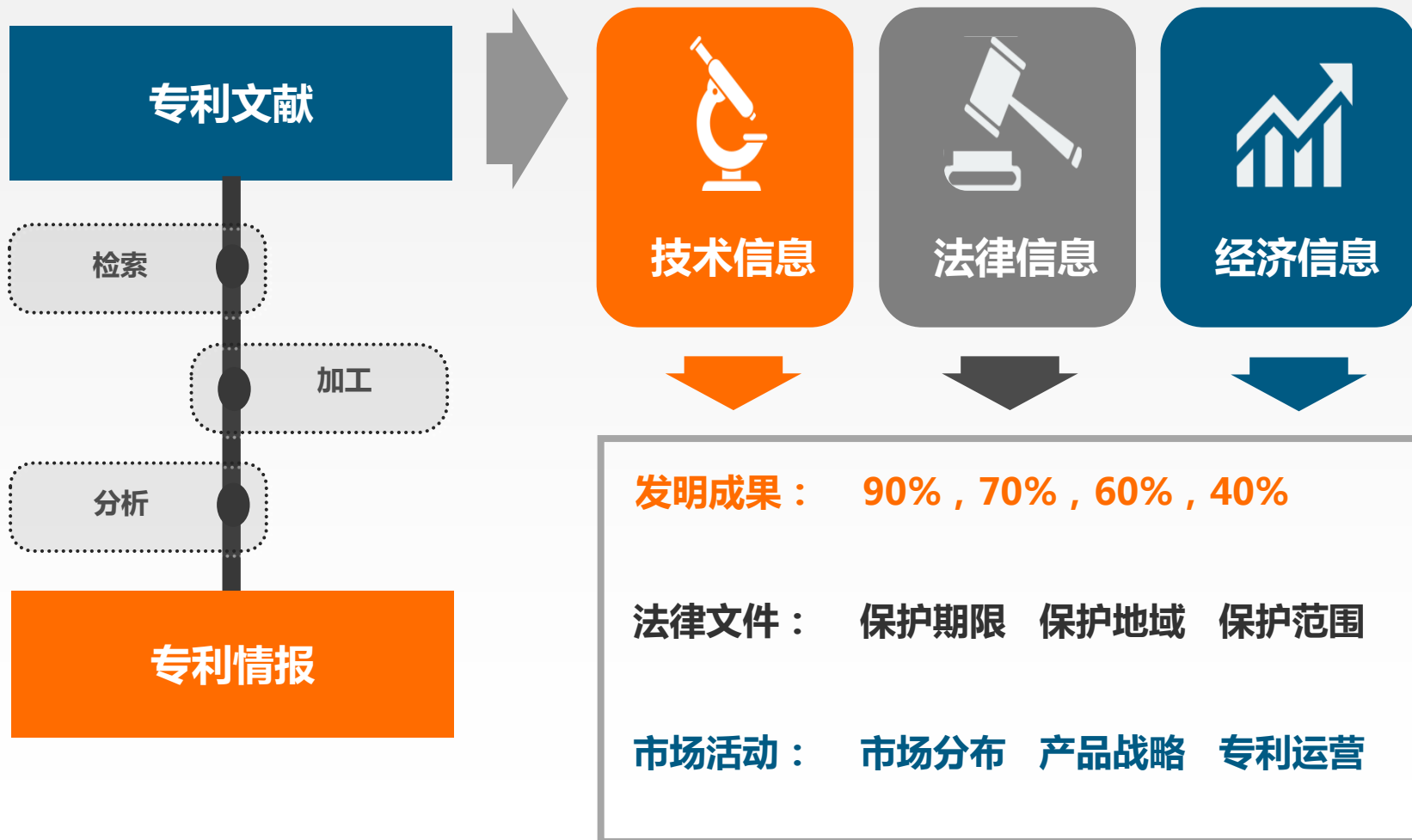
汤森路透知识产权与科技

2016.4

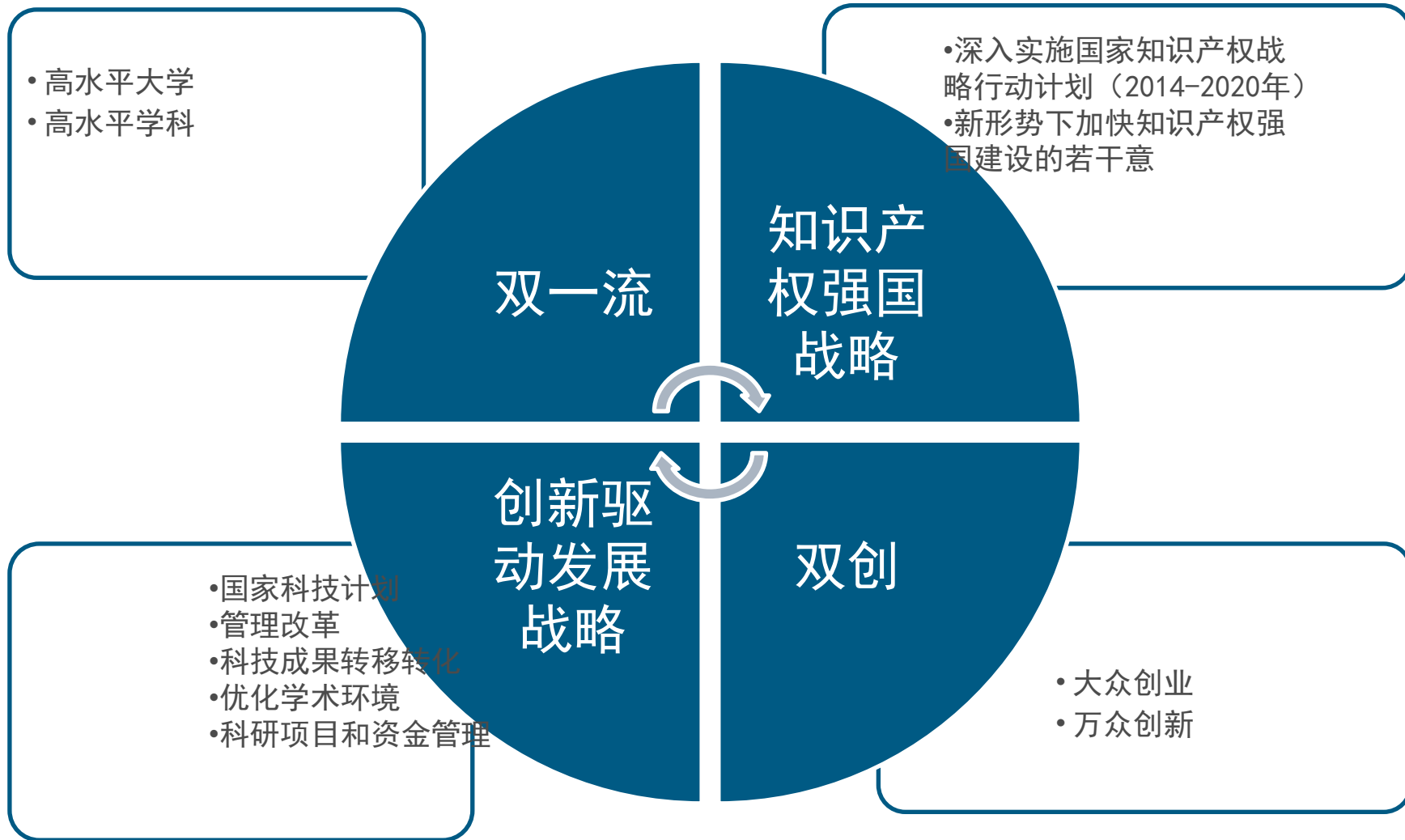


THOMSON REUTERS

专利情报很重要



教育科研机构将面临比以往都更加丰富、充满挑战而又有趣的专利活动



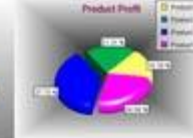
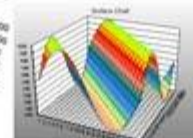
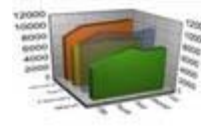
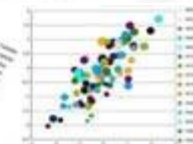
分析方法



分析方法与工具

Thomson Innovation

L3. Macro



Thomson Data Analyzer

L2. Semi-Macro



L1. Micro

大纲

1. 总体态势分析
2. 重点国家分析
3. 重要厂商分析
4. 具体技术分析
5. 核心专利分析

选题及检索策略：大规模天线阵列系统

检索和分析工具

- Thomson Innovation：按专利授予机构划分的专利集合-全部
- Thomson DATA ANALYZER(TDA)

在TI中的检索策略：

标题/摘要/权利要求： ((Massive or large scale)(MIMO or Multi-input Multi-output)) or Large Scale Antenna System

运算符的优先关系

(ADJ, NEAR) -> SAME -> (AND, NOT) > OR

检索结果概览

- 共检索到227条记录 (July 22,2015),归并同族后为139个专利同族记录

THOMSON INNOVATION

专利检索结果 (所有 DWPI 同族专利成员) 227 条检索结果

快速检索: 所有内容 Go ?

专利检索结果 (所有 DWPI 同族专利成员) 139 个 DWPI 同族专利 | 0 条选定的记录

高级二次检索 | 高亮显示 | 筛选 | 显示和排序选项 | 获取 DWPI 同族专利

保存 | 预警 | 标记结果列表 | 下载 | 分析 | 编辑自定义字段 | 打印

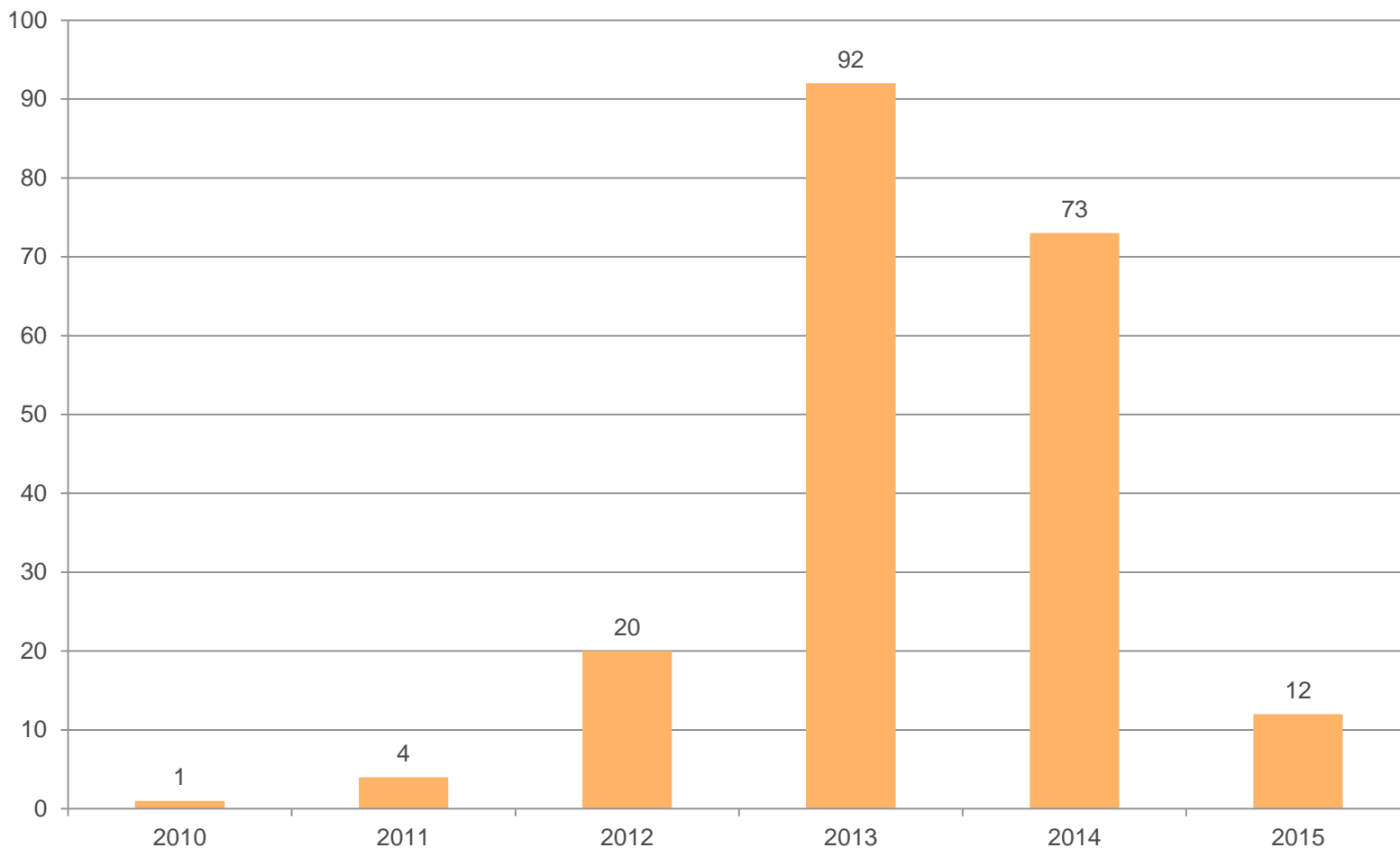
检索式	项目	公开号	专利权人/申请人	公开日期	现版 IPC
添加至工作文件 新建工作文件		US9072058B2	ASHIKHMIN ALEXEI	2015-06-30	H04W 52/24
		标题: Method and apparatus for power optimization in wireless systems with large antenna arrays			
<input type="checkbox"/>	1.1	US20130201908A1	ASHIKHMIN ALEXEI	2013-08-08	H04W 52/04
		标题: Method And Apparatus For Power Optimization In Wireless Systems With Large Antenna Arrays			
<input type="checkbox"/>	2	US8816929B2	KAM DONG G	2014-08-26	H01Q 1/48
		标题: Antenna array package and method for building large arrays			
<input type="checkbox"/>	2.1	US20130027271A1	IBM	2013-01-31	H01Q 21/00
		标题: ANTENNA ARRAY PACKAGE AND METHOD FOR BUILDING LARGE ARRAYS			
<input type="checkbox"/>	3	US8774146B2	ASHIKHMIN ALEXEI	2014-07-08	H04W 92/00
		标题: Large-scale antenna method and apparatus of wireless communication with suppression of intercell interference			
<input type="checkbox"/>	3.1	US20130156021A1	ASHIKHMIN ALEXEI	2013-06-20	H04W 92/00
		标题: Large-Scale Antenna Method And Apparatus Of Wireless Communication With Suppression Of Intercell Interference			
<input type="checkbox"/>	3.2	EP2795858A2	ALCATEL LUCENT	2014-10-29	H04L 25/03

一、总体态势分析

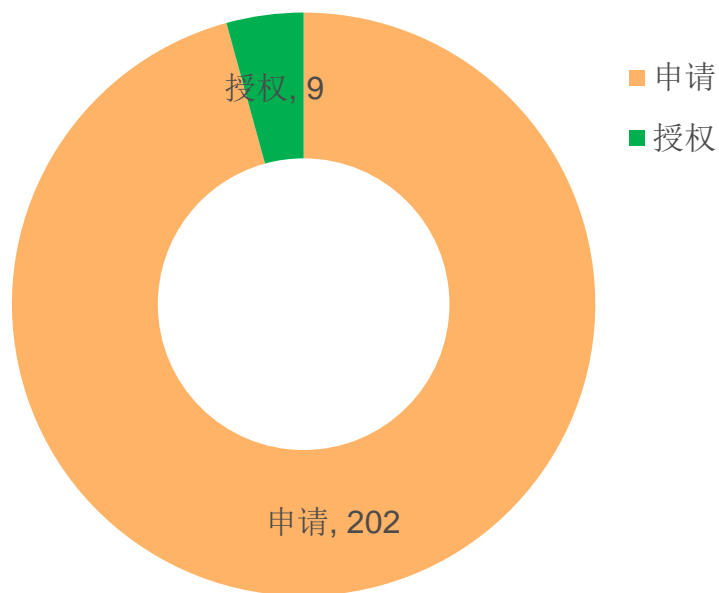
- 1.1 全球的专利申请趋势
- 1.2 发明专利的申请和授权比例
- 1.3 哪些国家/地区是全球的重要市场？
（厂商集中在哪些国家/地区申请专利）
- 1.4 从技术原创性对比各国家/地区
（各国家/地区的专利持有情况）
- 1.5 各国家/地区专利的全球布局
- 1.6 专利主要在企业、个人、科研机构还是政府手中？
- 1.7 最近3年新增加或消失的专利权人？

全球专利申请趋势

数据源：未DWPI家族归并-
用申请号去重
使用字段：application years;

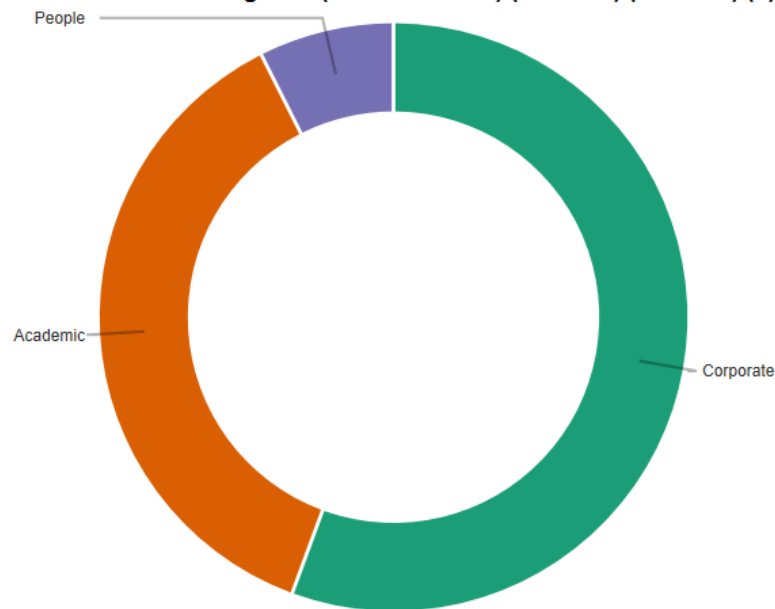


发明专利的申请vs授权



授权比例是5%

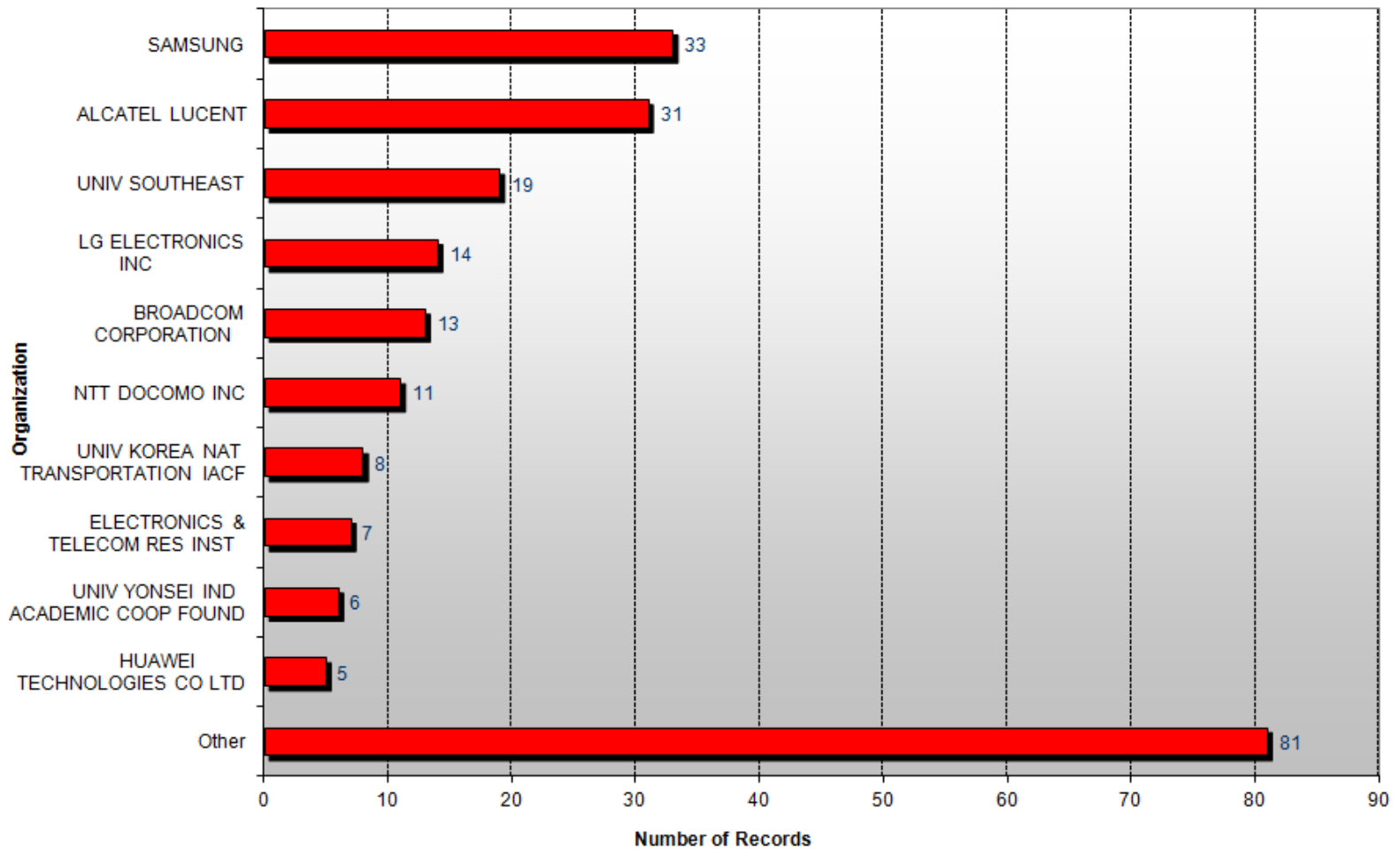
Pie Chart of Patent Assignees (Best Available) (Cleaned) (Cleaned) (1)



专利权人类型	专利量
Corporate	122
Academic	81
People	16

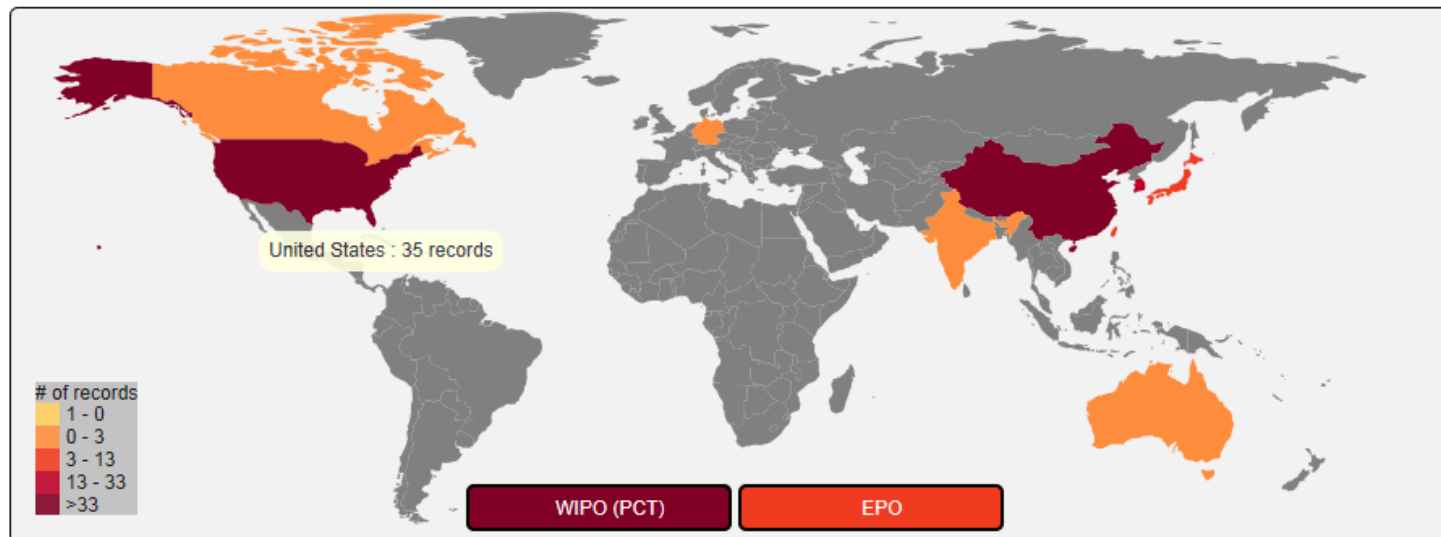
主要专利权人 (TOP10)

Number of Records per Organization



全球集中在哪些国家/地区申请专利

Map of Application Countries



国家地区	专利量	国家地区	专利量
CN	66	TW	5
WO	45	AU	1
US	35	CA	1
KR	26	DE	1
EP	12	IN	1
JP	9		

中国成为专利申请最多的国家，其次是美国和韩国，可以看到，**中国市场**在 Massive MIMO领域的重要性

数据源：未DWPI家族归并-
用申请号去重
使用字段：application countries;

各国家/地区技术原创性比较

Map of Priority Countries

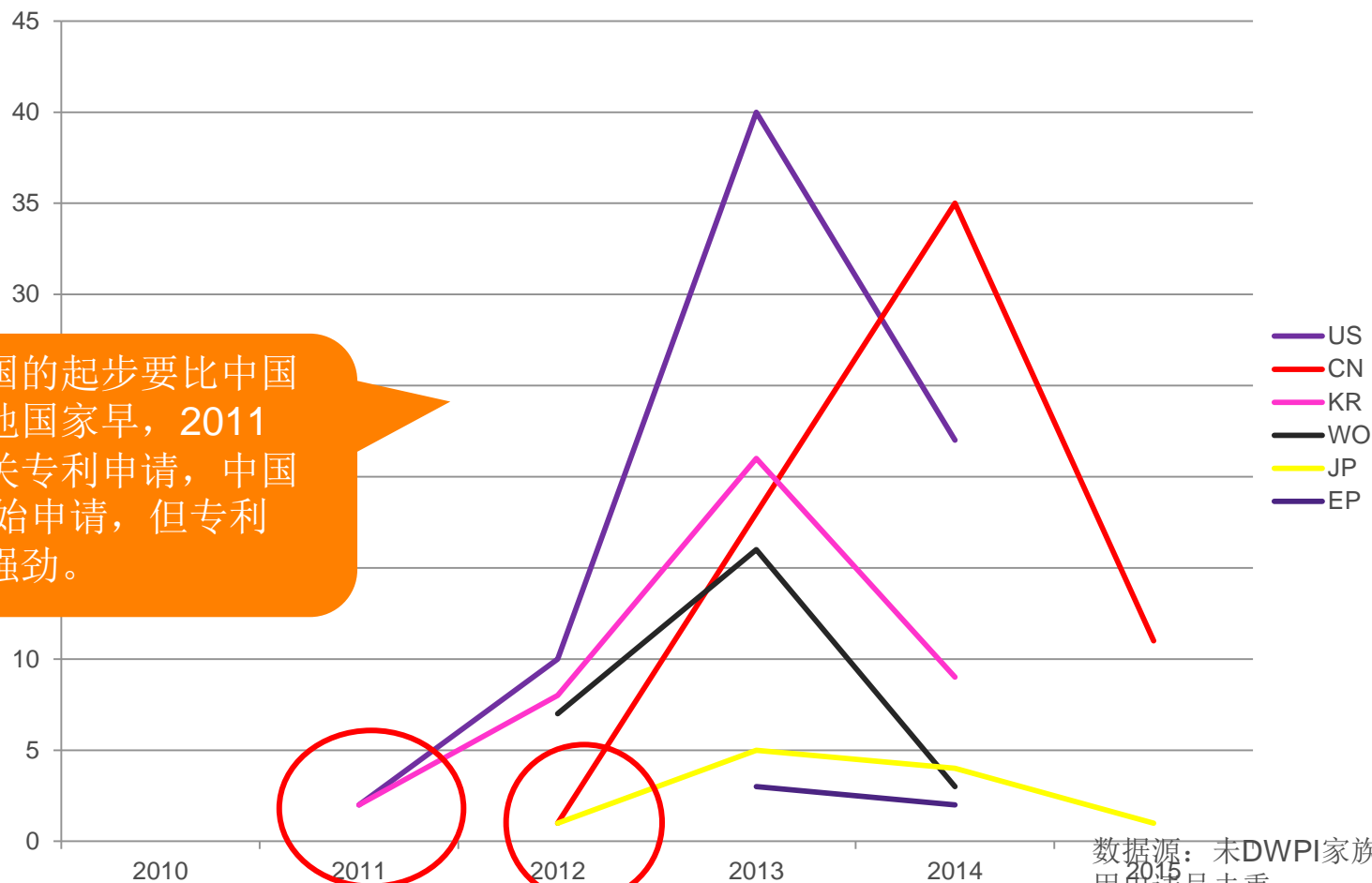


优先权国家或地区	DWPI家族数	所占比例
US	74	33.33%
CN	66	29.73%
KR	40	18.02%
WO	26	11.71%
JP	11	4.95%
EP	5	2.25%

优先权国一般意味着技术原创国，从数据分析看，美国是目前Massive MIMO领域领先的技术原创国

数据源：未DWPI家族归并用申请号去重
使用字段：priority countries

各技术原创国申请专利发展趋势



美国、韩国的起步要比中国在内的其他国家早，2011年就有相关专利申请，中国2012年开始申请，但专利申请势头强劲。

数据源：未DWPI家族归并用申请号去重
使用字段：
priority countries
Application years

各国家/地区专利的全球布局

Reset		Priority Countries	1	2	3	4	5	6	7	8	9	10	11	12	
		# Records	105	86	81	64	46	28	17	3	3	3	3	3	
Family Member Countries	# Records	▼ ▲ Show Values >= 1 and <= 58 Cooccurrence # of Records ▼ ▲													
			WO	US	CN	KR	EP	JP	TW	AU	CA	DE	HK	IN	
		1	74	US	55	58	19	24	19	6	12	3	3	3	3
		2	66	CN	8		50				3				
		3	40	KR	24	26	11	40	22	11					
		4	26	WO	26	19	14	18	17	10	5	1	1		1
		5	11	JP	10					11					
6	5	EP	2	2	1		5								

从各个国家专利全球布局可以看到，中国的全局布局明显不及美国和韩国

数据源：未DWPI家族归并
字段：
Priority countries
Family member country

最近3年新出现/消失的厂商

Organization Trends in Last 3 Years

Last 3 Years is: 2015 - 2013

Top Organizations in Last 3 Years

SAMSUNG [24]
 ALCATEL LUCENT [22]
 UNIV SOUTHEAST [19]
 LG ELECTRONICS INC [14]
 BROADCOM CORPORATION [13]
 NTT DOCOMO INC [11]
 ELECTRONICS & TELECOM RES INST [7]
 UNIV YONSEI IND ACADEMIC COOP FOUND [6]
 HUAWEI TECHNOLOGIES CO LTD [5]
 Tsinghua University [5]
 AHN J Y [4]
 NAM J Y [4]
 UNIV CHONBUK NAT IND COOP FOUND [4]
 UNIV SHANDONG [3]
 UNIV XIAN [3]
 UNIV NAM [3], TELECOM [3]

Organizations First Published in Last 3 Years

UNIV SOUTHEAST [19]
 LG ELECTRONICS INC [14]
 BROADCOM CORPORATION [13]
 NTT DOCOMO INC [11]
 ELECTRONICS & TELECOM RES INST [7]
 UNIV YONSEI IND ACADEMIC COOP FOUND [6]
 HUAWEI TECHNOLOGIES CO LTD [5]
 Tsinghua University [5]
 AHN J Y [4]
 NAM J Y [4]
 UNIV CHONBUK NAT IND COOP FOUND [4]
 UNIV SHANDONG [3]
 UNIV NANJING POST & TELECOM [3]
 UNIV BEIJING POST & TELECOM [3]
 MEDIATEK SIM [2]
 UNIV TE LTD [2]
 MOBASHEP [2]
 NI [2]
 F [2]
 S [2]
 Y [2]
 E [2]
 E [2]
 E [2]
 E [2]
 J [2]
 JINDAL N [2]
 UNIV BEIJING UNION [2]
 LIANG P [2]
 Wuxi Beiyou Perceptive Technology Industrial Institute Co. Ltd. [1]
 YUE G [1]
 Changzhou Campus of Hohai University [1]
 CHEN K [1]
 FUJITSU LTD [1]
 INDUSTRY-ACADEMIC COOPERATION FOUNDATION YONSEI UNIVERSITY [1]
 Zhengzhou University [1]
 J H J [1]
 KIM Y B [1]
 LEE H J [1]
 LIU Y [1]
 MESE M [1]
 NEC CO LTD [1]
 OYMAK S [1]
 PAPADOPOULOS H [1]
 PLA University of Science and Technology [1]
 PRASAD N [1]

Organizations No Longer Published in Last 3 Years

UNIV KOREA NAT TRANSPORTATION IND COOP [3]
 INDUSTRY-ACADEMIC COOPERATION FOUNDATION KOREAN NATIONAL UNIVERSITY OF TRANSPORTATION [2]
 UNIV NAGOYA [1]
 INTERNATIONAL BUSINESS MACHINES CORPORATION [1]

最近3年高申请量的专利权人：三星、阿尔卡特朗讯、LG、（美国）博通等

最近3年首次申请专利的，比如东南大学、博通、LG等

最近3年没有再申请专利的专利权人：国立韩国交通大学、名古屋大学、IBM等

Beijing University of Posts and Telecommunications [2]
 Chongqing University of Posts and Telecommunications [2]
 ELECTRONICS & TELECOMMUNICATIONS RESEARCH INST [2]
 TELEFONICA SA [2]
 JALLOUL L [2]
 JINDAL N [2]
 UNIV BEIJING UNION [2]
 LIANG P [2]
 BALACHANDRAN K [1]
 GUEY J [1]
 HUI D [1]
 TELEFONAKTIEBOLAGET ERICSSON L M [1]
 Wuxi Beiyou Perceptive Technology Industrial Institute Co. Lt [1]
 YUE G [1]
 KOREA ADVANCED INST SCI & TECHNOLOGY [1]
 Changzhou Campus of Hohai University [1]
 CHEN K [1]
 FUJITSU LTD [1]
 INDUSTRY-ACADEMIC COOPERATION FOUNDATION YONSEI UNIVERSITY [1]
 Zhengzhou University [1]

2. 重点国家分析

- 2.1 中国本土的专利权人？
- 2.2 在中国申请专利的外商？
- 2.3 本土专利权人vs外来专利权人之间技术布局的差别？
- 2.4 中国专利权人的海外布局？与其他国家比较？
- 2.5 中国与其他国家的技术布局差别？



以中国作为技术原创国申请专利的主要专利权人

专利权人	申请量	专利权人	申请量
UNIV SOUTHEAST	19	Changzhou Campus of Hohai University	1
ALCATEL LUCENT	5	NEC CO LTD	1
Tsinghua University	5	PLA University of Science and Technology	1
UNIV XIAN JIAOTONG	4	SAMSUNG	1
UNIV BEIJING POSTS & TELECOM	3	UNIV CHINA SCI & TECHNOLOGY	1
UNIV NANJING POSTS & TELECOM	3	UNIV CHONGQING POSTS & TELECOM	1
UNIV SHANDONG	3	UNIV HUAZHONG SCI & TECHNOLOGY	1
ZTE CORP	3	UNIV NANJING INFORMATION SCI & TECHNOLOG	1
BEIJING INST TECHNOLOGY	2	UNIV TONGJI	1
Beijing University of Posts and Telecommunications	2	UNIV XIDIAN	1
Chongqing University of Posts and Telecommunications	2	UNIV ZHEJIANG	1
SHANGHAI LANGBO COMMUNICATION TECHNOLOGY	2	Wuxi Beiyou Perceptive Technology Industrial Institute Co. Ltd.	1
UNIV BEIJING UNION	2	Zhengzhou University	1

无锡贝优光伏科技有限公司

数据源：未DWPI家族归并，归并申请号后
使用字段：

Priority countries 中提取CN成立subdataset->Patent assignee (best available) (cleaned)



哪些外商在中国布局了相关专利

专利权人	专利量	专利权人	专利量
UNIV SOUTHEAST	18	BROADCOM CORPORATION	1
Tsinghua University	5	Changzhou Campus of Hohai University	1
ALCATEL LUCENT	4	ELECTRONICS & TELECOM RES INST (韓國電子通信研究院)	1
UNIV XIAN JIAOTONG	4	NEC CO LTD	1
UNIV BEIJING POSTS & TELECOM	3	PLA University of Science and Technology	1
UNIV NANJING POSTS & TELECOM	3	UNIV CHINA SCI & TECHNOLOGY	1
UNIV SHANDONG	3	UNIV CHONGQING POSTS & TELECOM	1
BEIJING INST TECHNOLOGY	2	UNIV HUAZHONG SCI & TECHNOLOGY	1
Beijing University of Posts and Telecommunications	2	UNIV NANJING INFORMATION SCI & TECHNOLOG	1
Chongqing University of Posts and Telecommunications	2	UNIV TONGJI	1
SAMSUNG	2	UNIV XIDIAN	1
SHANGHAI LANGBO COMMUNICATION TECHNOLOGY	2	UNIV ZHEJIANG	1
UNIV BEIJING UNION	2	Wuxi Beiyou Perceptive Technology Industrial Institute Co. Ltd.	1
ZTE CORP	2	Zhengzhou University	1

数据源：未DWPI家族归并，归并申请号后
使用字段：

Application countries中提取CN成立subdataset->Patent assignee (best available) (cleaned)



Reset		International Classifications 8 (with Definitions)	1	2
		# Records	59	9
Patent Assignees	# Records	Show Values >= 1 and <= 24 Cooccurrence # of Records	native	Foreigner
1	28	H04B 7/04: Electricity -> Electric Communication Technique -> Transmission -> Radio transmission systems, i.e. using radiation field -> Diversity systems -> using a plurality of spaced independent aerials	24	6
2	15	H04L 25/02: Electricity -> Electric Communication Technique -> Transmission Of Digital Information, E.G. Telegraphic Communication -> Baseband systems -> Details	15	
3	15	H04L 5/00: Electricity -> Electric Communication Technique -> Transmission Of Digital Information, E.G. Telegraphic Communication -> Arrangements affording multiple use of the transmission path	14	1
4	11	H04B 7/06: Electricity -> Electric Communication Technique -> Transmission -> Radio transmission systems, i.e. using radiation field -> Diversity systems -> using a plurality of spaced independent aerials -> at transmitting station	11	1
5	11	H04L 1/06: Electricity -> Electric Communication Technique -> Transmission Of Digital Information, E.G. Telegraphic Communication -> Arrangements for detecting or preventing errors in the information received -> by diversity reception -> using space diversity	10	1
6	8	H04L 27/26: Electricity -> Electric Communication Technique -> Transmission Of Digital Information, E.G. Telegraphic Communication -> Arrangements for detecting or preventing errors in the information received -> by diversity reception -> using space diversity	6	2
7	6	H04L 1/00: Electricity -> Electric Communication Technique -> Transmission Of Digital Information, E.G. Telegraphic Communication -> Arrangements for detecting or preventing errors in the information received	6	1
8	5	H04B 7/08: Electricity -> Electric Communication Technique -> Transmission -> Radio transmission systems, i.e. using radiation field -> Diversity systems -> using a plurality of spaced independent aerials -> at receiving station	5	
9	3	H04L 25/03: Electricity -> Electric Communication Technique -> Transmission Of Digital Information, E.G. Telegraphic Communication -> Baseband systems -> Details -> Shaping networks in transmitter or receiver, e.g. adaptive shaping networks	2	1
10	3	H04W 72/04: Electricity -> Electric Communication Technique -> Wireless Communication Networks -> Local resource management, e.g. selection or allocation of wireless resources or wireless traffic scheduling -> Wireless resource allocation	3	
11	3	H04W 72/12: Electricity -> Electric Communication Technique -> Wireless Communication Networks -> Local resource management, e.g. selection or allocation of wireless resources or wireless traffic scheduling -> Wireless traffic scheduling	3	

由于massive MIMO在全球的发展刚刚起步，所以，目前外商在中国就相关技术的布局并没有明显突出的优势

以中国作为优先权国的专利权人的海外布局 (中国本土专利权人的海外布局)

Reset	Patent Assignees (Best Available) (Cleaned) (Clean	1	2
	# Records	50	8
Family Member Countries	# Records	▼ ▲	
		Show Values >= 1 and <= 16	
	Cooccurrence # of Records		
		▼ ▲	CN WO
1	19	UNIV SOUTHEAST	16 2
2	5	Tsinghua University	4
3	4	UNIV XIAN JIAOTONG	4
4	3	UNIV BEIJING POSTS & TELECOM	3
5	3	UNIV NANJING POSTS & TELECOM	2
6	3	UNIV SHANDONG	2
7	3	ZTE CORP	1 1
8	2	BEIJING INST TECHNOLOGY	2
9	2	SHANGHAI LANGBO COMMUNICATION TECHNOLOGY	2
10	2	UNIV BEIJING UNION	2
11	1	UNIV CHINA SCI & TECHNOLOGY	1
12	1	UNIV CHONGQING POSTS & TELECOM	1
13	1	UNIV HUAZHONG SCI & TECHNOLOGY	1
14	1	UNIV NANJING INFORMATION SCI & TECHNOLOG	1
15	1	UNIV TONGJI	1
16	1	UNIV XIDIAN	1
17	1	UNIV ZHEJIANG	1

VS

美国各主要厂商的全球布局

- 数据源：未DWPI家族归并
1. Priority countries 选取CN成立子集
 2. 从patent assignees中选取中国本土专利权人，与family member countries生成共现矩阵

以美国作为优先权国的专利权人的海外布局

Reset		Patent Assignees (Best Available) (Cleaned) (Cle	1	2	3	4	5	6	7	8	9	10	11	12
		# Records	58	55	24	19	19	12	6	3	3	3	3	3
Family Member Countries	# Records	▼ ▲												
		Show Values >= 1 and <= 22												
		▼ ▲	US	WO	KR	CN	EP	TW	JP	AU	CA	DE	HK	IN
1	22	ALCATEL LUCENT	22	21	12	12	12	12	6					
2	14	LG ELECTRONICS INC	2	14	2					3	3			
3	13	BROADCOM CORPORATION	13			3						3	3	
4	11	SAMSUNG	10	10	10	4	4							
5	3	TELEFONAKTIEBOLAGET ERICSSON L M	3	3			3							3
6	2	MEDIATEK SINGAPORE PTE LTD	2	2										
7	2	NEC LAB AMERICA INC	2	2										
8	1	HUAWEI TECHNOLOGIES CO LTD	1											
9	1	INTERNATIONAL BUSINESS MACHINES CORPORATION	1											
10	1	NTT DOCOMO INC		1										

数据源：未DWPI家族归并

1. Priority countries选取US成立子集
2. 用patent assignees与family member countries生成共现矩阵

中国与其他国家的技术布局差别

Reset		Manual Codes	1	2	3	4	5	6
		# Records	74	66	40	26	11	5
Priority Countries	# Records	▼ ▲ Show Values >= 1 and <= 49						
		▼ ▲ Concurrence	US	CN	KR	WO	JP	EP
1	142	W02-C03A5	49	44	36	15	7	4
2	78	W01-A06C4	31	14	18	14	11	3
3	40	W02-C03G1	17	4	12	9	6	
4	36	W01-B05A1A	15	5	12	8		2
5	32	W02-C03C1B	18	5			7	2
6	29	W02-C03C1H	17	5	3	3		2
7	28	W02-C03E1A	11	9	8	1		
8	27	W01-A01A	11	11	3	1		2
9	17	W02-C03C1	11	2		4	4	
10	16	W02-C03C1G	8		8	3		
11	15	W01-A08X		15				
12	15	W02-K07C	4	5	4	3		
13	11	W01-A08B2	8	2	1	1		
14	10	T01-S03	6			2		2
15	10	W01-A03		10				
16	10	W01-C01D3C	3		6	4		
17	10	W02-K02	10			3		
18	9	W01-A06E	1		8	2		

美国、中国、韩国等比较集中布局在比如

W02-C03A5: Broadcasting, radio and line transmission systems (广播, 无线电和线路传输系统) -> Transmission systems (general) -> Radio systems (无线电系统) -> Diversity systems (分集技术) -> Hybrid diversity schemes (混合分集方案)

W01-A06C4: Telephone and data transmission systems (电话和数据传输系统) -> Digital information transmission (数字信息传输) -> Exchanges; connections between exchanges (including LAN) (交换; 交换间连接(包括局域网)) -> Characterised by medium -> Radio link (无线电路)

中国技术布局比较薄弱的比如

W02-C03G1: Broadcasting, radio and line transmission systems (广播, 无线电和线路传输系统) -> Transmission systems (general) -> Radio systems (无线电系统) -> Resource allocation and cognitive radio systems (资源分配和认知无线电系统) -> Resource allocation (资源分配)

W01-B05A1A: Telephone and data transmission systems (电话和数据传输系统) -> Selecting -> Connecting via radio or inductive links -> Radio -> For mobile radio telephone system(用于移动无线电话系统) -> Cellular (蜂窝移动通信)

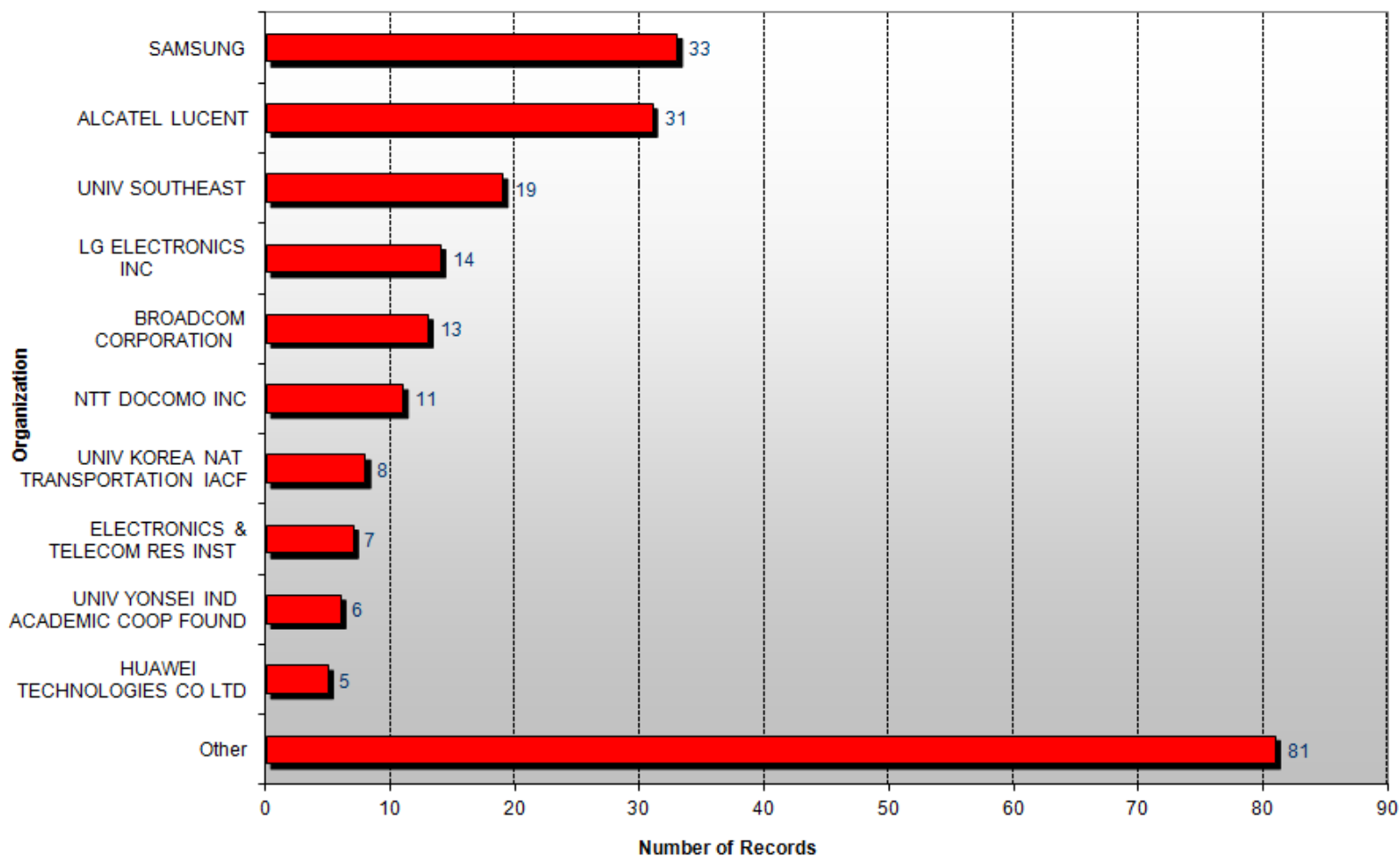
3. 重要专利权人分析

- 3.1 全球有哪些重要专利权人？
- 3.2 这些重要专利权人的活跃度？
- 3.3 他们在全球其他国家/地区的布局？
- 3.4 重要专利权人的相似度比较



全球有哪些专利权人 (TOP10)

Number of Records per Organization



全球主要厂商的活跃度

Reset	Patent Assignees (Best Available) (Cleaned) (Cleaned)	1	2	3	4	5
	# Records	4	20	92	73	12
Application Years	# Records	▼ ▲ Show Values >= 1 and <= 17				
		Cooccurrence # of Records				
		▼ ▲				
		2011	2012	2013	2014	2015
1	33	SAMSUNG	2	7	17	7
2	31	ALCATEL LUCENT	1	8	13	9
3	14	LG ELECTRONICS INC			8	6
4	13	BROADCOM CORPORATION			11	2
5	11	NTT DOCOMO INC			5	5 1
6	5	HUAWEI TECHNOLOGIES CO LTD			5	
7	3	TELEFONAKTIEBOLAGET ERICSSON L M	2	1		
8	3	ZTE CORP	1	1	1	
9	2	MEDIATEK SINGAPORE PTE LTD				2
10	2	NEC LAB AMERICA INC				2
11	2	SHANGHAI LANGBO COMMUNICATION TECHNOLOGY			2	
12	2	TELEFONICA SA			1	1
13	1	FUJITSU LTD			1	
14	1	INTERNATIONAL BUSINESS MACHINES CORPORATION	1			
15	1	NEC CO LTD				1
16	1	Wuxi Beiyou Perceptive Technology Industrial Institute Co. Ltd.				1

来自公司的专利权人约16家，申请主要集中在2013-2014年。申请量较大的有三星、阿尔卡特朗讯、LG、博通。而且从分布的年代来看，三星和阿尔卡特朗讯保持着比较持续的热力分布，多少可见其比较明确的战略布局

数据源：未DWPI家族归并，用申请号去重
使用字段：

application_year与Patent assignees (best available (cleaned))生成共现矩阵

全球主要厂商的技术领域分布

Reset	Patent Assignees (Best Available) (CI)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42			
	# Records	30	26	20	19	18	18	18	17	16	16	14	12	11	10	10	10	10	10	10	9	9	8	8	7	7	7	6	6	6	6	6	6	6	6	6	6	5	5	5	5	5	4	4		
CPC Codes	# Records	H04B7/0413	H04B7/0617	H04L5/0023	H04B7/0456	H04L25/0204	H04L5/0048	H04WW16/28	H04B7/0626	H04B7/0452	H04B7/0639	H04W7/2042	H04L5/0051	H04B7/0417	H04B7/04	H04B7/0619	H04B7/0691	H04W24/10	H04W7/2085	H04L5/0057	H04W7/204	H04L1/0026	H04W16/32	H04B7/0634	H04L25/0226	H04W16/14	H04B7/063	H04L1/06	H04L20/25/03426	H04L25/03343	H04L27/2675	H04L5/005	H04W5/224	H04W5/2243	H04W88/08	Y02B60/50	H04B7/0408	H04B7/0684	H04L5/00	H04L5/143	H04W7/2046	H04B7/0469	H04B7/0478			
	Cooccurrence # of Records																																													
1	33 SAMSUNG	1	8	12	6	8	8	4	8	2	10	13	6	6	2	2		8	10	4	7	8			4		2	6								3				4		2	4			
2	31 ALCATEL LUCENT	7	4	3	1	3	5	5	3				5	2	3		2							5		3	6			6	6	6	6	6				3	2			2				
3	14 LG ELECTRONICS INC	5		2			3		4					1	3	2		2		2					2			2											3							
4	13 BROADCOM CORPORATION	9	2	1	4	3				2			1		3	2		6																			1		1	5		1				
5	11 NTT DOCOMO INC	3	3		1			9							1	1					2		3	1											2											
6	5 HUAWEI TECHNOLOGIES CO LTD	1	3		1	1				1					1							2																								
7	3 TELEFONAKTIEBOLAGET ERICSSON L M	2		2			2		2								2																													
8	2 MEDIATEK SINGAPORE PTE LTD					2				2																																				
9	2 NEC LAB AMERICA INC									2																																	1	2		
10	2 TELEFONICA SA																																									2		2		
11	1 FUJITSU LTD																				1																									

对于公司来讲，申请的专利技术布局覆盖越广泛说明其业务越广泛。可以看到，三星、阿尔卡特朗讯的技术布局目前在massive mimo领域是最广泛和全面的。

学术机构的活跃度

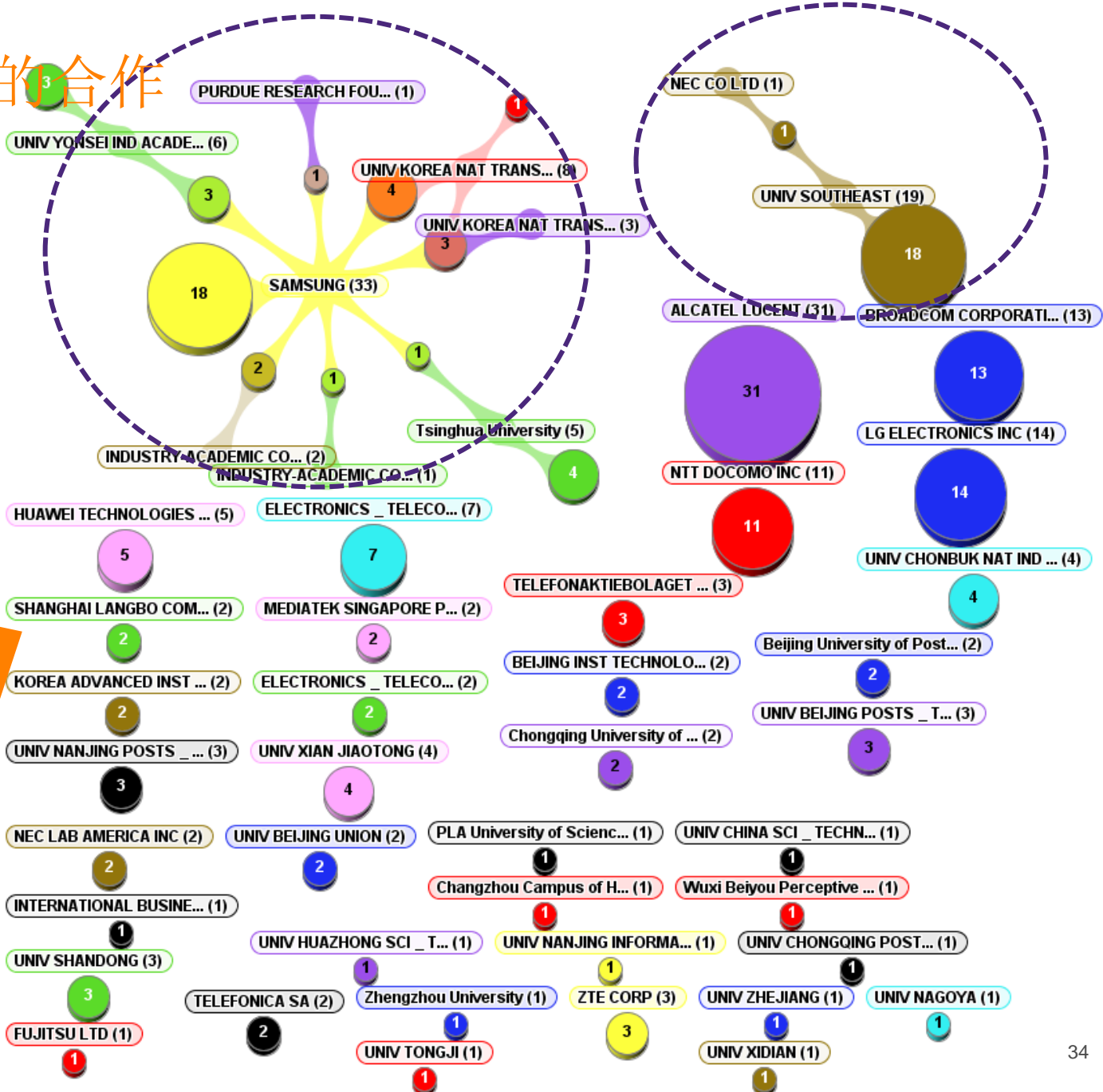
Reset		Patent Assignees (Best Available) (CI	1	2	3	4	5	6
		# Records	1	4	20	92	73	12
Application Years	# Records	▼ ▲						
		Show Values >= 1 and <= 10						
		Cooccurrence	2010	2011	2012	2013	2014	2015
1	19	UNIV SOUTHEAST				6	10	3
2	8	UNIV KOREA NAT TRANSPORTATION IAC		2	4	2		
3	6	UNIV YONSEI IND ACADEMIC COOP FOUN				5	1	
4	5	Tsinghua University				2	2	1
5	4	UNIV CHONBUK NAT IND COOP FOUN				4		
6	4	UNIV XIAN JIAOTONG	1				3	
7	3	UNIV BEIJING POSTS & TELECOM				1	2	
8	3	UNIV KOREA NAT TRANSPORTATION IND		1	2			
9	3	UNIV NANJING POSTS & TELECOM				1	1	1
10	3	UNIV SHANDONG					2	1
11	2	BEIJING INST TECHNOLOGY				1	1	
12	2	Beijing University of Posts and Telecommu					1	1
13	2	Chongqing University of Posts and Teleco						2
14	2	ELECTRONICS & TELECOMMUNICATIONS					2	
15	2	INDUSTRY-ACADEMIC COOPERATION FO			2			
16	2	KOREA ADVANCED INST SCI & TECHNOL			1	1		
17	2	UNIV BEIJING UNION					2	
18	1	Changzhou Campus of Hohai University						1
19	1	INDUSTRY-ACADEMIC COOPERATION FO					1	
20	1	PLA University of Science and Technolog					1	
21	1	UNIV CHINA SCI & TECHNOLOGY				1		
22	1	UNIV CHONGQING POSTS & TELECOM					1	
23	1	UNIV HUAZHONG SCI & TECHNOLOGY					1	
24	1	UNIV NAGOYA			1			
25	1	UNIV NANJING INFORMATION SCI & TECH				1		
26	1	UNIV TONGJI					1	
27	1	UNIV XIDIAN					1	
28	1	UNIV ZHEJIANG					1	
29	1	Zhengzhou University						1

massive MIMO到目前为止，来自大学及科研机构的专利权人约29家，申请主要集中在2013-2015年。申请量最大的是东南大学，共计19件专利，其次是国立韩国交通大学

数据源：未DWPI家族归并-用申请号去重
使用字段：
application year
Patent assignees (best available (cleaned))



专利权人之间的合作 (不考虑个人)



目前，Massive MIMO领域专利权人合作并不普遍。
 ✓三星与国内的国立韩国交通大学、延世大学，与美国普渡大学技术商业化基金会、我国的清华大学存在合作；
 ✓东南大学与NEC存在过合作



专利权人相似度比较

Reset	Patent Assignees (Best Available) (C)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	# Records	33	8	2	3	19	4	2	11	14	1	2	7	31	2	13	3	4	2	3	1	5	5
	▼ ▲ Show Values >= 0.00 and <= 1.00 Cross-Correlation Crossed With: Manual Codes 1 Groups (Items) # of Records Cosine																						
	SAMSUNG	1.000																					
1	ALCATEL LUCENT	0.663	0.502	0.499	0.490	0.603	0.488	0.490	0.723	0.403	0.688	0.447	0.426	0.663	0.456	0.479	0.488	0.436	0.456	0.408	0.533	0.232	0.437
2	UNIV SOUTHEAST	0.729	0.627	0.601	0.584	0.700	0.814	0.561	0.670	0.627	0.724	0.608	0.648	0.603	0.684	0.604	0.696	0.645	0.694	0.709	0.561	0.695	0.340
3	LG ELECTRONICS INC	0.700	0.547	0.474	0.449	0.627	0.702	0.549	0.409	0.700	0.516	0.749	0.775	0.403	0.770	0.707	0.602	0.689	0.661	0.539	0.424	0.591	0.442
4	BROADCOM CORPORATION	0.641	0.480	0.406	0.349	0.604	0.665	0.349	0.422	0.707	0.488	0.697	0.683	0.479	0.597	0.600	0.507	0.823	0.506	0.666	0.378	0.525	0.496
5	NTT DOCOMO INC	0.702	0.584	0.590	0.607	0.670	0.554	0.607	0.700	0.409	0.784	0.370	0.390	0.723	0.501	0.422	0.555	0.409	0.511	0.427	0.607	0.297	0.317
6	UNIV KOREA NAT TRANSPORTATION IAC	0.813	0.700	0.973	0.870	0.627	0.614	0.557	0.584	0.547	0.584	0.487	0.514	0.502	0.578	0.480	0.625	0.500	0.472	0.516	0.453	0.475	0.407
7	ELECTRONICS & TELECOM RES INST	0.663	0.514	0.472	0.422	0.648	0.805	0.422	0.390	0.775	0.545	0.965	0.780	0.426	0.667	0.683	0.650	0.684	0.545	0.569	0.422	0.678	0.343
8	UNIV YONSEI IND ACADEMIC COOP FOUND	0.397	0.304	0.236	0.181	0.444	0.431	0.181	0.167	0.354	0.234	0.362	0.418	0.182	0.477	0.499	0.278	0.570	0.311	0.488	0.181	0.363	0.172
9	HUAWEI TECHNOLOGIES CO LTD	0.505	0.407	0.389	0.379	0.340	0.332	0.253	0.317	0.442	0.327	0.379	0.343	0.437	0.400	0.496	0.324	0.382	0.327	0.256	0.253	0.330	0.000
10	Tsinghua University	0.521	0.475	0.449	0.482	0.695	0.689	0.321	0.297	0.591	0.415	0.643	0.678	0.232	0.508	0.525	0.536	0.516	0.518	0.596	0.321	0.700	0.330
11	UNIV CHONBUK NAT IND COOP FOUND	0.618	0.500	0.423	0.378	0.645	0.649	0.378	0.409	0.689	0.488	0.680	0.684	0.436	0.657	0.823	0.543	0.600	0.537	0.764	0.378	0.516	0.382
12	UNIV XIAN JIAOTONG	0.726	0.614	0.586	0.572	0.814	0.700	0.572	0.554	0.702	0.615	0.763	0.805	0.488	0.678	0.665	0.685	0.649	0.554	0.579	0.477	0.689	0.332
13	TELEFONAKTIEBOLAGET ERICSSON L M	0.317	0.254	0.204	0.183	0.427	0.435	0.183	0.169	0.342	0.236	0.365	0.385	0.197	0.289	0.530	0.281	0.621	0.236	0.492	0.183	0.367	0.115
14	UNIV BEIJING POSTS & TELECOM	0.627	0.625	0.574	0.513	0.696	0.685	0.513	0.555	0.602	0.662	0.616	0.650	0.488	0.649	0.507	0.680	0.543	0.530	0.553	0.513	0.536	0.324
15	UNIV KOREA NAT TRANSPORTATION IND	0.789	0.870	0.894	0.700	0.584	0.572	0.600	0.607	0.449	0.516	0.400	0.422	0.490	0.474	0.349	0.513	0.378	0.387	0.405	0.400	0.482	0.379
16	UNIV NANJING POSTS & TELECOM	0.576	0.516	0.452	0.405	0.709	0.579	0.405	0.427	0.539	0.522	0.539	0.569	0.408	0.533	0.666	0.553	0.764	0.522	0.600	0.405	0.596	0.256
17	UNIV SHANDONG	0.405	0.329	0.302	0.270	0.567	0.643	0.270	0.249	0.471	0.348	0.539	0.569	0.194	0.640	0.392	0.415	0.459	0.435	0.364	0.270	0.542	0.171
18	ZTE CORP	0.410	0.389	0.375	0.447	0.497	0.533	0.224	0.224	0.224	0.289	0.447	0.472	0.258	0.354	0.390	0.344	0.423	0.289	0.302	0.224	0.539	0.283
19	BEIJING INST TECHNOLOGY	0.594	0.472	0.433	0.387	0.694	0.554	0.387	0.511	0.627	0.515	0.515	0.515	0.456	0.714	0.506	0.530	0.537	0.600	0.522	0.516	0.518	0.327
20	Beijing University of Posts and Telecommu	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	Chongqing University of Posts and Teleco	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	ELECTRONICS & TELECOMMUNICATIO	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

通过对申请专利的技术领域分布情况（Manual code），可以了解各专利权人的相似度情况。比如在Massive MIMO领域，和三星技术比较相似的专利权人有国立韩国交通大学、东南大学、西安交通大学、NEC、NTT等

4. 具体技术分析

4.1 全球的技术布局

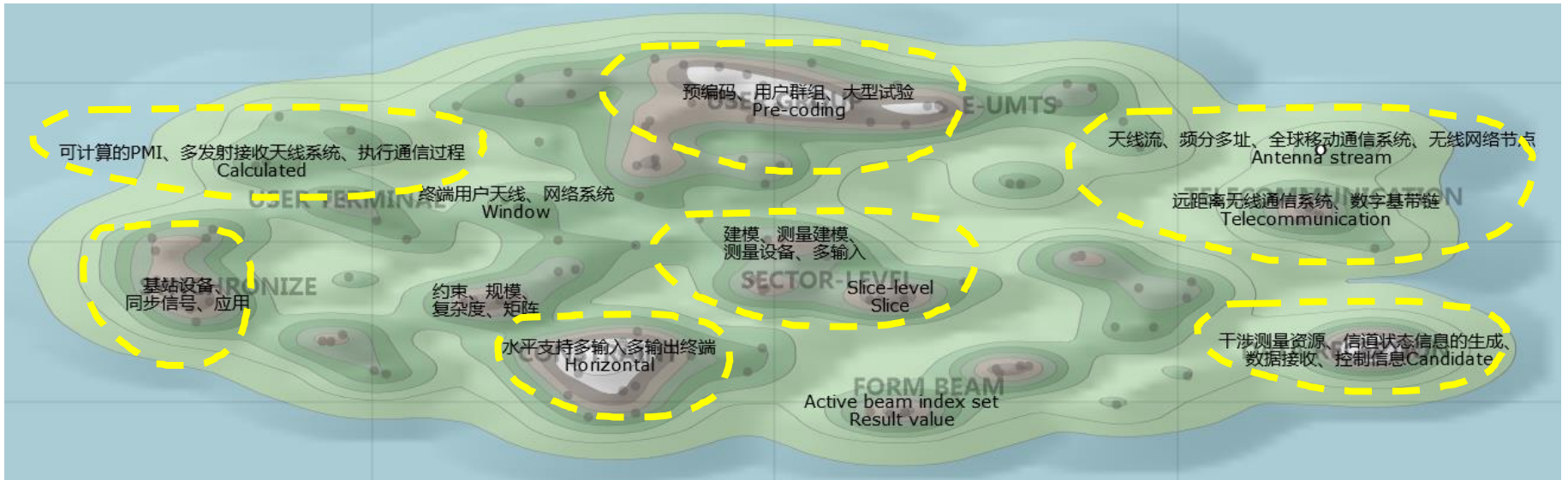
4.2 技术发展随时间的推移

4.3 专利量较大的国家/地区间的技术布局对比

4.4 深入分析领域中某一个技术点



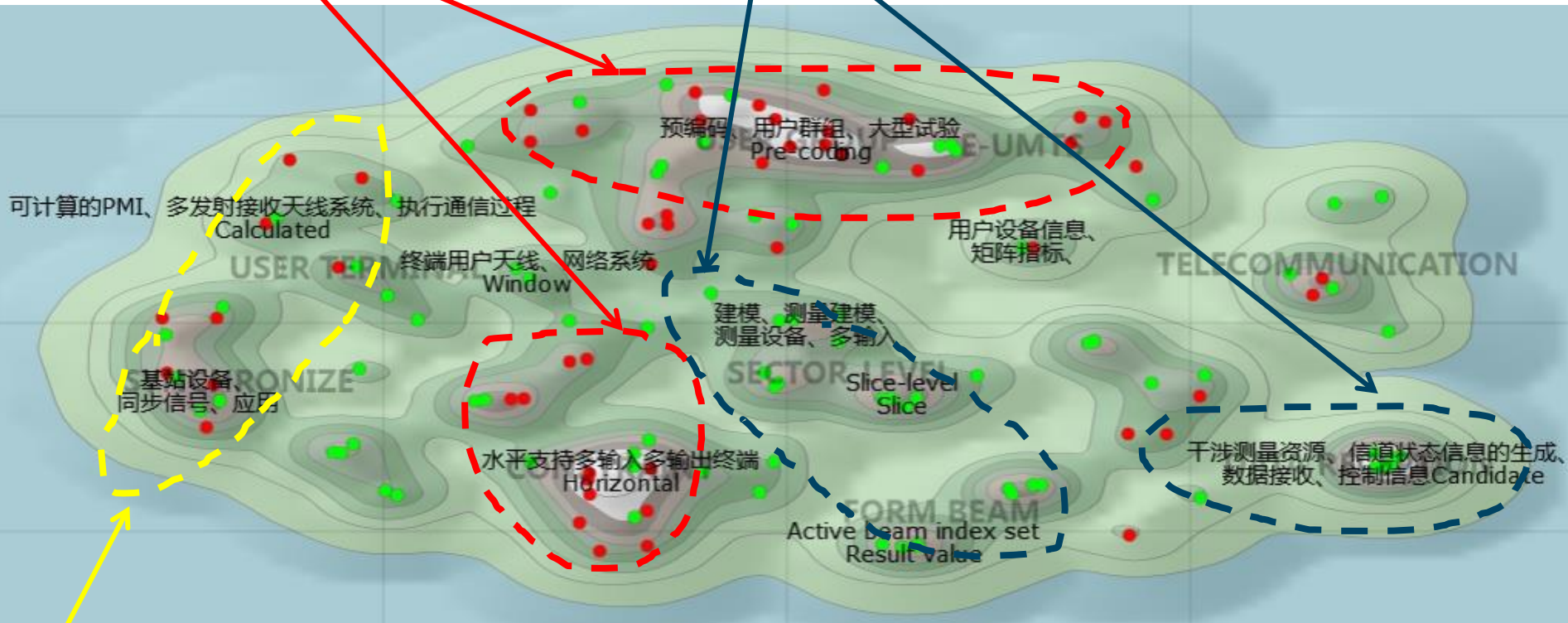
整体技术布局



技术发展随时间的推移

2014年后的热点

2014年前热点



持续热点

名称	文献数
主题索引	0
2014-2015	52
2010-2013	84

技术发展随时间的推移

Reset		Application Years	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
		# Records	142	78	40	36	32	29	28	27	17	16	15	15	11	10	10	10	10	9	8	8	8	8	7	7	7	7	7	6	6	6	6	6	6	6	6	
Manual Codes	# Records	▼ ▲	Show Values >= 1 and <= 68																																			
		▼ ▲	Cooccurrence # of Records																																			
			W02-C03A5	W01-A06C4	W02-C03G1	W01-B05A1A	W02-C03C1B	W02-C03C1H	W02-C03E1A	W01-A01A	W02-C03C1	W02-C03C1G	W01-A08X	W02-K07C	W01-A08B2	T01-S03	W01-A03	W01-C01D3C	W02-K02	W01-A06E	T01-J04C	W01-A09D	W01-C01D3G	W02-C03E3	T01-C03C	W01-A03D5	W01-A04A2	W01-A06G5C	W02-C03A1B	W02-H01J5	T01-E03	W01-A03C	W01-A03D1	W02-C03A	W02-C03C1A	W02-C03E1	W02-C05A	
1	1	2010	1							1																			1									
2	4	2011	2	3	1						1			1						2						1												
3	20	2012	12	15	5	2	3			2	3	5	1		4	2	1		1	1	6	1		1	1		3			1	1				1			
4	92	2013	68	36	24	24	18	15	16	14	3	7	7	3	6	7	3	9	6	1	4	3	7	1	4	2	3	3	6	5	2	2	1	1	3	3	5	
5	73	2014	58	23	9	10	10	14	10	9	8	8	8	7	3	2	7		3		3	5		6	3	1	4	4		1	3	4	5	4	3	3	1	
6	12	2015	1	1	1		1																															

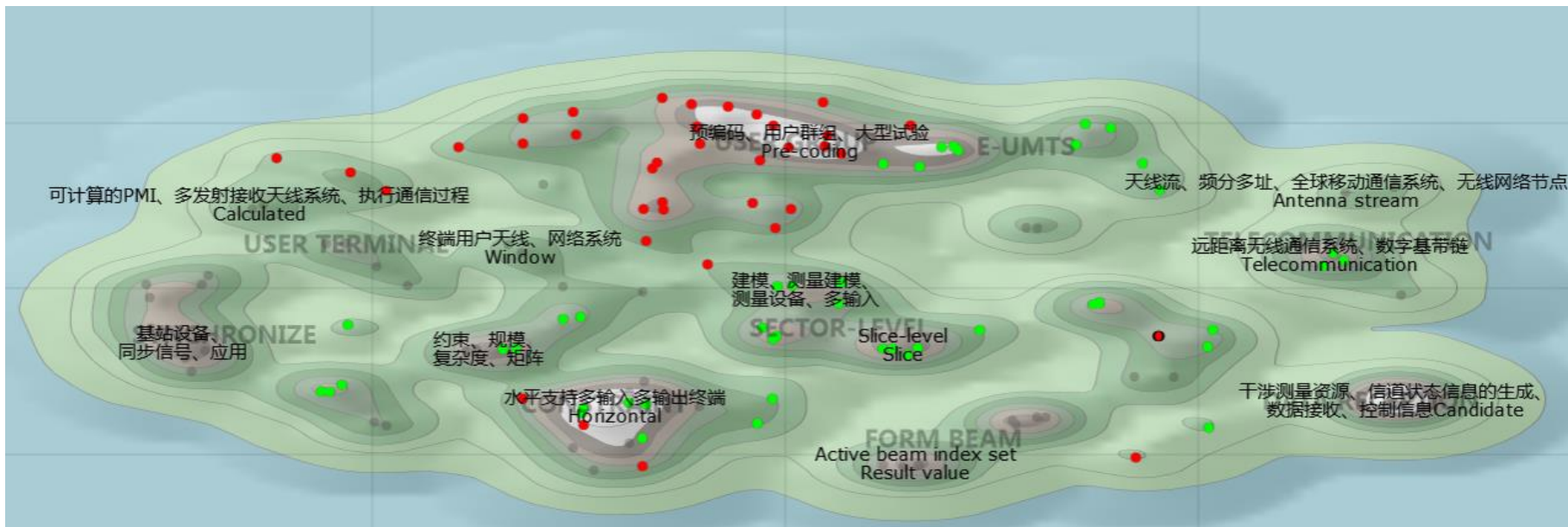
W02-C03A5: Broadcasting, radio and line transmission systems (广播, 无线电和线路传输系统) -> Transmission systems (general) -> Radio systems (无线电系统) -> Diversity systems (分集技术) -> Hybrid diversity schemes (混合分集方案)

W01-A06C4: Telephone and data transmission systems (电话和数据传输系统) -> Digital information transmission (数字信息传输) -> Exchanges; connections between exchanges (including LAN) (交换; 交换间连接 (包括局域网)) -> Characterised by medium -> Radio link (无线电路)

W02-C03G1: Broadcasting, radio and line transmission systems (广播, 无线电和线路传输系统) -> Transmission systems (general) -> Radio systems (无线电系统) -> Resource allocation and cognitive radio systems (资源分配和认知无线电系统) -> Resource allocation (资源分配)

W01-B05A1A: Telephone and data transmission systems (电话和数据传输系统) -> Selecting -> Connecting via radio or inductive links -> Radio -> For mobile radio telephone system(用于移动电话系统) -> Cellular (蜂窝移动通信)

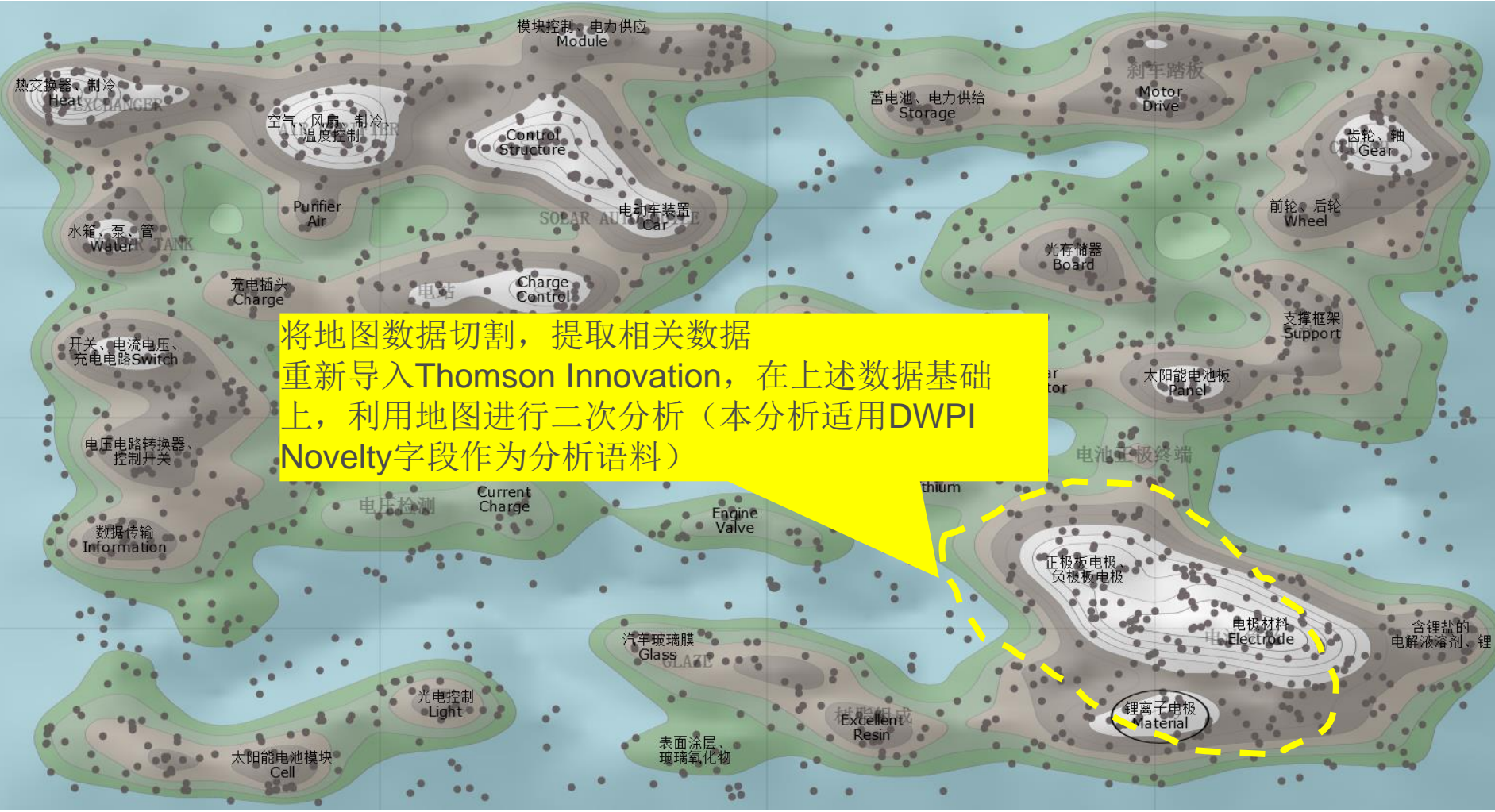
原创国技术侧重比较：中国vs美国



○	名称	文献数
	主题索引	0
	2014-2015	52
	2010-2013	84
●	CN	37
●	US	46

切割重点区域

将地图数据切割，提取相关数据
重新导入Thomson Innovation，在上述数据基础上，利用地图进行二次分析（本分析适用DWPI Novelty字段作为分析语料）



5. 核心专利分析

- 5.1 衡量核心专利的指标体系
- 5.2 如何查找家族信息？
- 5.3 专利的被引用情况？
- 5.4 如何查找法律状态信息？



汤森路透专利打分 (Patent Scoring)



客观指标:

- **Forward Citation Count**
- Backward Citation Count
- Years to Expiry
- **Age-Weighted Citation**
- Quad Family Protection

半客观指标:

- **Registered as Standards-Essential?**
- Acquired?
- **Advanced Citation Analysis**
- **Subject of Current or Past Litigation**
- Key Term Density

主观指标:

- Claim Scope/Breadth
- Detectability
- Known Prior Art
- Maturity of Technology
- **Commercial Use**
- Incorporated into Standard

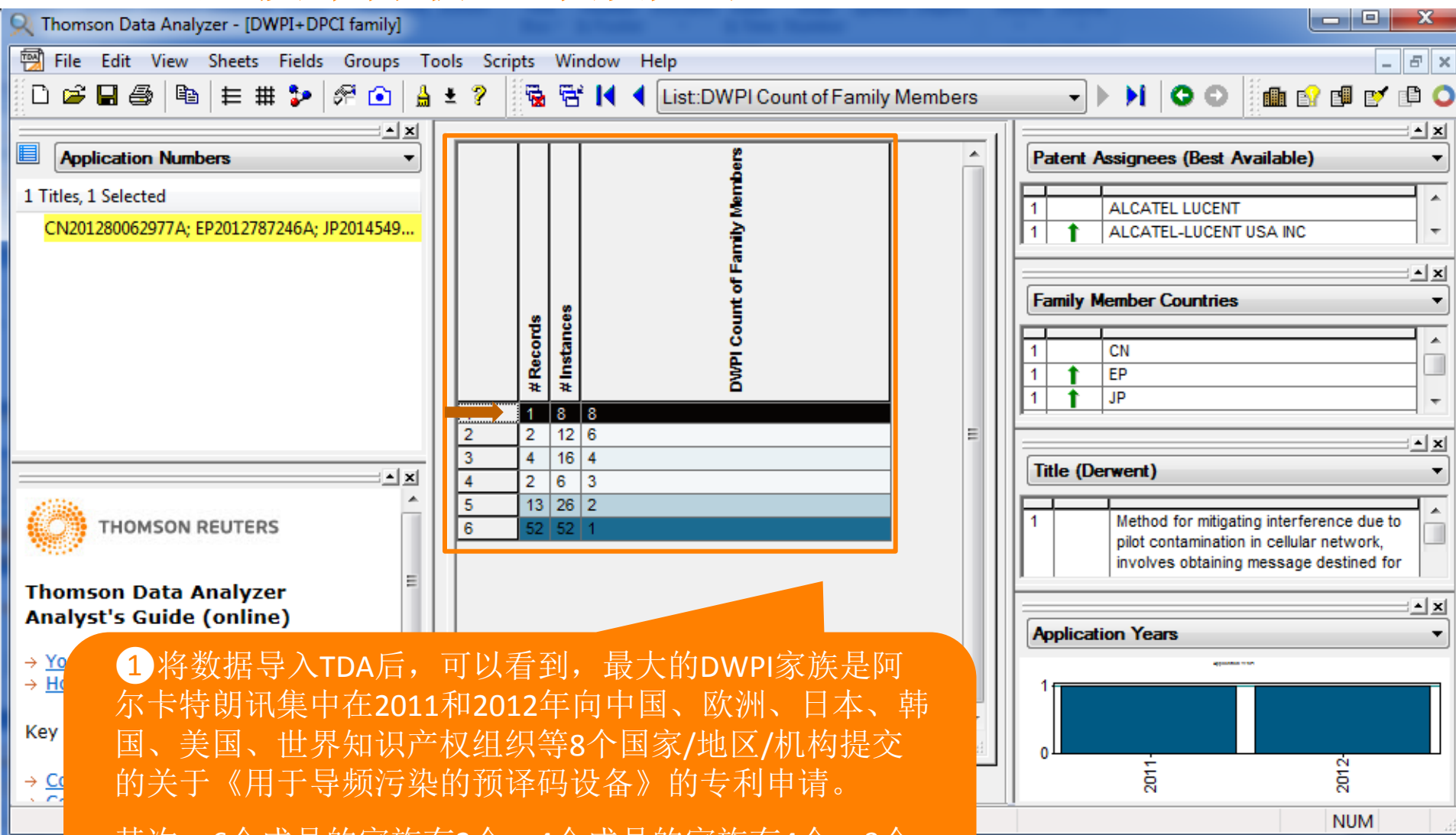
Index-Weighting Dashboard

Absolute & Relative Patent Scores delivered into TI

技术分析 – 核心专利

- 参考因素：
 - 发明性专利
 - 专利被引次数（次数，自引，被引）
 - 同族专利（数量，PCT，发达国家申请）
 - 专利分类号数量
 - 专利付费与维持情况
 - 中美欧日四方专利申请数量
 - 法律诉讼多少
 - 关键专利权人或发明人
 - 科学研究关联程度
 - 权利要求和技术内容专家判断

重点技术分析：家族大小



① 将数据导入TDA后，可以看到，最大的DWPI家族是阿尔卡特朗讯集中在2011和2012年向中国、欧洲、日本、韩国、美国、世界知识产权组织等8个国家/地区/机构提交的关于《用于导频污染的预译码设备》的专利申请。

其次，6个成员的家族有2个，4个成员的家族有4个，3个成员的家族有2个。

重点技术分析：家族大小

记录视图: JP9102429A

添加至工作文件 | 标记记录 | 监控记录 | 下载 ▼ | 翻译 ▼ | 引证关系图 | 高亮显示 | 打印

完整浏览 跳转至: 著录项目 摘要 分类/索引 法律状态 **同族专利** 权利要求 说明书 引用 其他

化学结构片段代码 ?

+ 展开 化学结构片段代码

法律状态

INPADOC 法律状态 ?

获取同族专利法律状态

同族专利

同族专利 ?

+ 展开 INPADOC 同族专利 (19)

+ 展开 DWPI 同族专利 (10); 国家/地区 (5)

专利号	IPC 分类号	IPC 子类	IPC 主类	DWPI 备注
JP9102429A	197-04-15	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
DE69713962A1	2000-05-29	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
DE69713963A1	2000-11-28	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
DE69714670A1	2000-10-05	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
DE69714671A1	2000-03-09	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP0204833A3	2000-12-20	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP0204834A3	1997-08-06	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP0204835A3	1998-02-04	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP0204836A3	2002-08-06	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP0204837A3	1997-08-06	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP0204838A3	1998-02-04	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP0204839A3	2002-04-15	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP0204840A3	2004-11-10	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP0204841A3	2004-05-29	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP0204842A3	2000-05-29	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP0204843A3	1997-04-15	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP0204844A3	1997-08-06	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP0204845A3	1998-10-13	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP0204846A3	1998-12-15	H02M 07/22	H02M 07/22	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil

专利号	IPC 分类号	IPC 子类	IPC 主类	IPC 备注	语言
JP9102429A *	199725	1997-04-15	H02M07/22	Japanese	
Local Applications: JP1996192187A filed 1996-07-22					
US0602433A *	199736	1997-08-06	H02M07/22	English	
Designated States: (Regional) DE FR GB					
Local Applications: EP1997101355A filed 1997-01-29					
Designated States: (Regional) DE FR GB					
Local Applications: EP1997101356A filed 1997-01-29					
Designated States: (Regional) DE FR GB					
Local Applications: US1997791104A filed 1997-01-30					
US0602434A *	199848	1998-10-12	H02M07/22	English	
Local Applications: US1997791105A filed 1997-01-30					
US0602435A *	199906	1999-12-15	H02M07/22	English	
Local Applications: US1997791106A filed 1997-01-30					
US0602436A *	200105	2000-12-20	H02M07/22	English	
Designated States: (Regional) DE FR GB					
Local Applications: EP1997101358A filed 1997-01-29					
EP2000114922A filed 1997-01-29					
Designated States: (Regional) DE FR GB					
Local Applications: EP2000114923A filed 1997-01-29					
EP199711963A1 *	200227	2002-04-17	H02M07/22	English	
Designated States: (Regional) DE FR GB					
Local Applications: EP2000114924A filed 1997-01-29					
EP199711964A1 *	200041	2000-05-23	H02M07/22	German	
Local Applications: EP1997101359A filed 1997-01-29					
EP199711965A1 *	200204	2002-08-28	H02M07/22	English	
Designated States: (Regional) DE FR GB					
Local Applications: EP1997101360A filed 1997-01-29					
EP199711966A1 *	200273	2002-10-02	H02M07/22	German	
Local Applications: EP1997101361A filed 1997-01-29					
EP199711967A1 *	200273	2002-10-02	H02M07/22	German	

2 可以在TI中直接查找家族信息

重点技术分析：施引专利计数

THOMSON INNOVATION

专利检索结果

快速检索: 所有内容 打印机 Go ?

213 条检索结果, 从 97,399,317 条记录中获取 (显示记录数上限为: 60,000)

高级二次检索 | 高亮显示 | 筛选 | 显示和排序选项 | 获取 DWPI 同族专利

0 条选定的记录

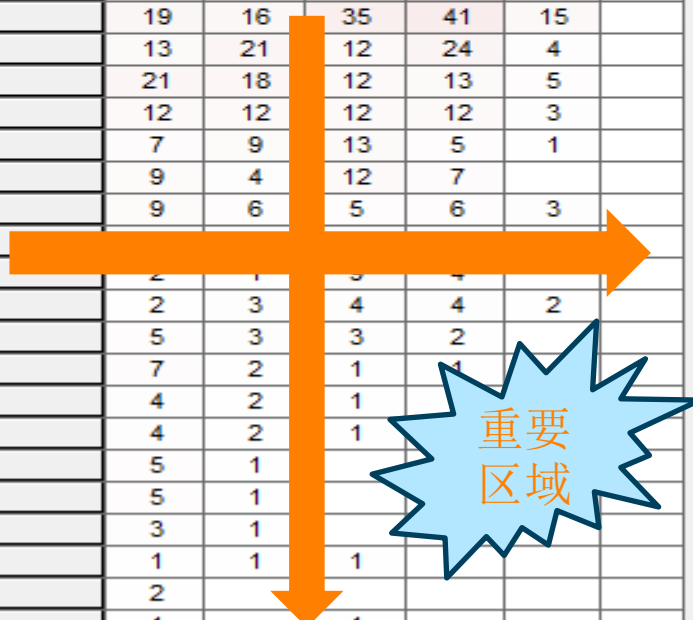
保存 | 预警 | 标记结果列表 | 下载 | 分析 | 编辑自定义字段 | 打印

项目	公开号	发明人	DWPI 专利权人/申请人	公开日期	DWPI 分类	DPCI 施引专利计数
1	CN101867402A	ZHU Shi-hua	UNIV XIAN JIAOTONG	2010-10-20	W01;W02	3
<p>DWPI 标题: Multi-input and output system, has receiver including receiving antenna array, receiving antenna array adaptor, receiving end radio frequency chain, and receiving end wave beam former</p> <p>摘要: The invention claims a MIMO system based on self-adaptive antenna selection and a use method thereof, wherein the system comprises a transmitter, a receiver and a wireless channel; the antenna selecting process in the MIMO system uses iteration feedback structure; a sub-array is rapidly chosen from antenna assembly with large number based on feature of 60GHz channel without accurately evaluating channel to make the sub-channel corresponding to the chosen antenna sub array be optimized under the defined target function for data transmission at high speed by the chosen optimized antenna sub array; the invention claims a rapid and effective MIMO system application method with low cost, which overcomes the shortcomings of high complicated degree and low efficiency of traditional antennal choosing method in large-scale MIMO system; test shows that good property system can be obtained by less iteration and lower computational complexity; it further shows that the invention can support application of large-scale antenna array</p>						
2	US20130163544A1	LEE Hyojin	SAMSUNG ELECTRONICS CO LTD	2013-06-27	W01;W02	2
<p>non-advanced system, involves selecting beam having greatest gain for transmitter, and</p> <p>formation feedback are provided. Signals for beams to be transmitted through</p> <p>d by precoding the signals with beamforming vectors. The beams are selected into a</p> <p>shared. The beams are transmitted, using resources allocated per group to a receiver.</p> <p>based on the received beams. The feedback information is transmitted to the transmitter.</p> <p>the feedback information. A transmission resource is allocated for the selected beam</p>						
3			TRONICS	2013-07-18	W01;W02	2
<p>ence signal to cell phones in a Long Term Evolution system involves transmitting</p>						

	# Records	# Instances	DPCI Citing Patent Count
1	3	11	2
2	1	4	1
	70	105	0

加入时间综合考虑被引次数

重设			Times Cited					
			1	2	3	4	5	6
	记录数量		354	440	587	872	690	166
Publication Year	▼ ▲							
	Show Values >= 1 and <= 570							
	共现记录数量							
	记录数量		2010	2011	2012	2013	2014	2015
1	1962	0	133	228	318	570	561	152
2	402	1	42	67	105	110	65	13
3	181	2	33	25	32	61	29	1
4	126	3	19	16	35	41	15	
5	74	4	13	21	12	24	4	
6	69	5	21	18	12	13	5	
7	51	6	12	12	12	12	3	
8	35	9	7	9	13	5	1	
9	32	7	9	4	12	7		
10	29	8	9	6	5	6	3	
11	26	10						
12	16	12						
13	15	11	2	3	4	4	2	
14	13	13	5	3	3	2		
15	11	15	7	2	1	1		
16	9	16	4	2	1			
17	8	14	4	2	1			
18	8	20	5	1				
19	6	21	5	1				
20	6	29	3	1				
21	3	19	1	1	1			
22	2	17	2					
23	2	18	1		1			
24	2	22	1		1			



重点技术分析：施引专利计数

专利检索结果 10,892 条检索结果, 从 97,142,944 条记录中获取 (显示记录数上限为: 60,000) ? 帮助

高级二次检索 | 高亮显示 | 筛选 | 显示和排序选项 | 获取 DWPI 同族专利

0 条选定的记录 显示精炼和二次检索

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项目	公开号	DWPI 专利权人/申请人	公开日期	优先权国家/地区 - 最早 - DWPI	DPCI 施引专利计数
2	EP797258A2	SONY CORP	1997-09-24	JP	227
DWPI 标题: Thin film semiconductor manufacturing method includes forming two or more porous layers having different porosities defining line of weakness along which grown semiconductor film is separated from substrate					
3	JP9102429A	SUMITOMO DENSO KK	1997-04-15	JP	161
DWPI 标题: Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil, for charging of battery of vehicle					
4	DE3941027A1	GLAVERBEL	1990-07-12	GB	154
DWPI 标题: Coated glazing including silicon nitride protected by sacrificial metal oxide layer					
5	US5612152A	ENERGY	1997-03-18	US	152
DWPI 标题: Power supply system with fuel cell stack and storage battery e.g. for electric vehicle has power supply obtained from fuel cell stack or storage battery with residual charge monitor measuring battery residual charge and charger providing recharge					
6	DE1973				126
DWPI 标题: Power supply system with fuel cell stack and storage battery e.g. for electric vehicle has power supply obtained from fuel cell stack or storage battery with residual charge monitor measuring battery residual charge and charger providing recharge					
7	US5644207A	UNIV JOHNS HOPKINS	1997-07-01	US	107
DWPI 标题: Modular integrated power source e.g. for walkie-talkie radio, or motor vehicle includes solar cells laminated onto polymer battery, which is laminated onto substrate containing circuits which manage polymer battery charging, where charging occurs via solar energy or using external RF					

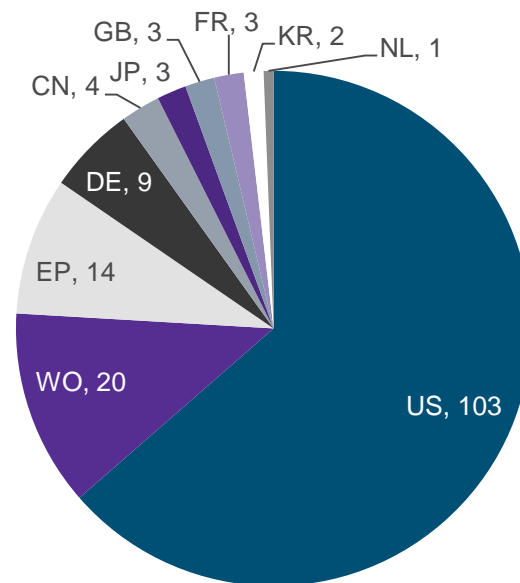
以住友电装株式会社1997年公开的关于
电动车充电电池连接系统的专利为例

重点技术分析：施引专利情况

引用过该家族的专利权人(TOP15)

专利权人/申请人	文献计数	百分比
WITRICITY CORP	18	5.11%
POWERMAT TECHNOLOGIES LTD	16	4.55%
KESLER MORRIS P	13	3.69%
HALL KATHERINE L	12	3.41%
KULIKOWSKI KONRAD J	11	3.13%
BEN-SHALOM AMIR	10	2.84%
KURS ANDRE B	10	2.84%
AZANCOT YOSSI	9	2.56%
GREENWALD OOLA	9	2.56%
KARALIS ARISTEIDIS	9	2.56%
ROFE ARIK	9	2.56%
QUALCOMM INC	8	2.27%
SOLJACIC MARIN	8	2.27%
FORD GLOBAL TECH LLC	7	1.99%
AISIN AW CO	6	1.70%

施引专利的国家或地区分布（申请国）



英特尔与WiTricity进军无线充电领域

发稿时间：2014-06-12 08:10:00 来源：中国青年网



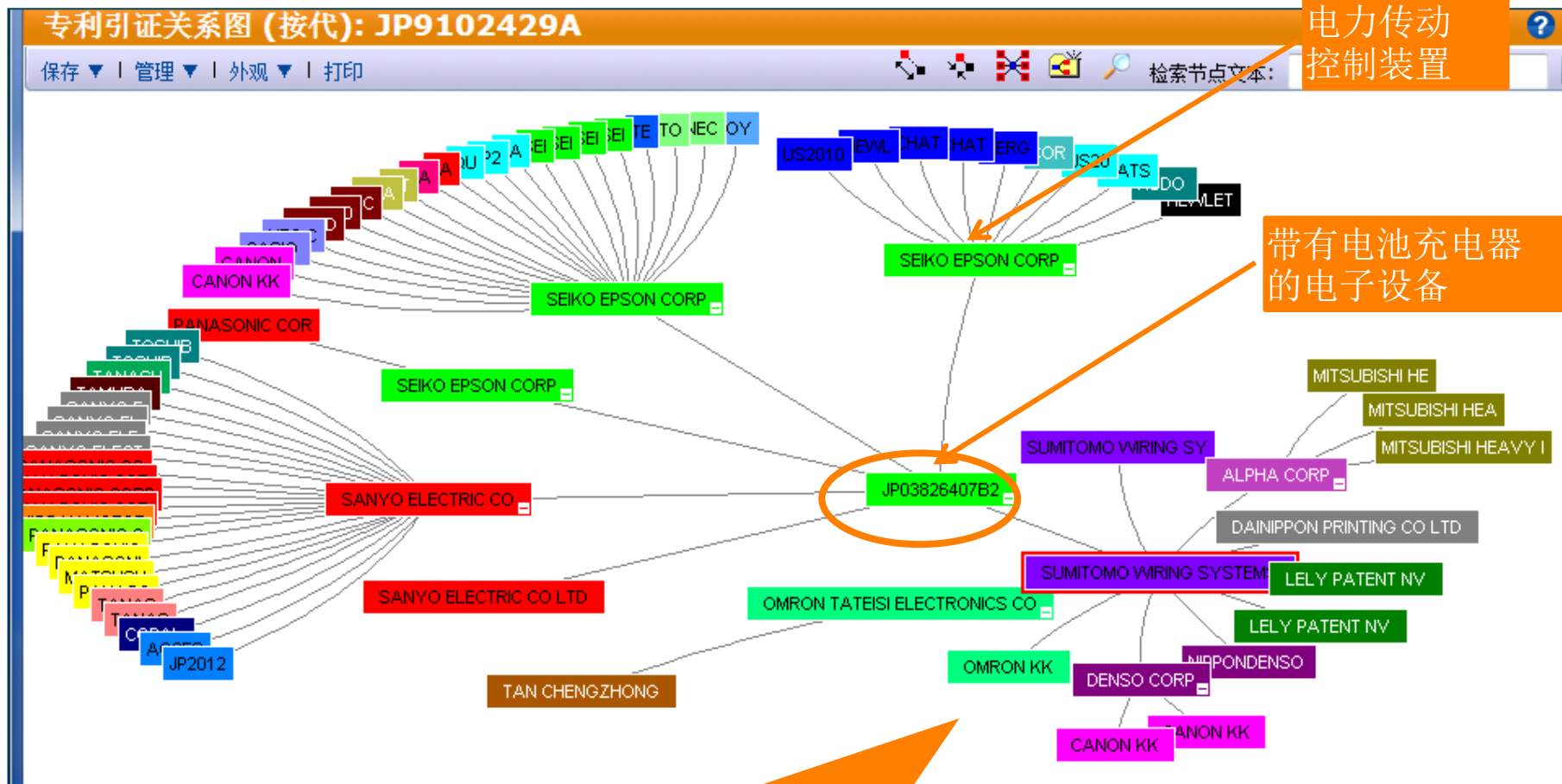
重点技术分析：施引专利情况

其他专利对该家族关注的热度



重点技术分析：施引专利情况

该家族基础专利JP9102429A与其施引专利的引证关系图（3代引证）



以住友电装株式会社1997年公开的关于电动车充电电池连接系统的专利为例

重点技术分析：查看法律状态

JP9102429A 同族专利法律状态报告 - 找到 19 个结果

跳转	出版物	标题	申请	申请号
	JP9102429A	CHARGING DEVICE FOR ELECTRIC AUTOMOBILE	1996-07-22	JP1996192187A
状态	JP9215211A	CHARGING SYSTEM FOR ELECTRIC VEHICLE	1996-02-02	JP199617486A
状态	JP910212376A	CHARGE SYSTEM FOR ELECTRIC VEHICLE	1996-01-30	JP199614032A
状态	JP9102329A	CHARGING SYSTEM FOR ELECTRIC VEHICLE	1996-04-03	JP199681750A
状态	US5831135A	Connecting system and a connection method	1997-01-30	US1007701100A
状态	US5821711A	Connection system and connection method for an electric automotive vehicle	1997-01-30	US1007701100A
状态	EP788211B1	A connection system and a connection method	1997-01-29	EP1007701100A
状态	EP788212B1	Connection system and connection method for an electric automotive vehicle	1997-01-29	EP1007701100A

因为未支付年费而取消

JP9215211A: 状态	公报日期	代码	描述 (评论)	列举所有可能的代码 JP
状态	2010-08-20	LAPS -	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
状态	2009-06-02	FPAY +	RENEWAL FEE PAYMENT (PRS DATE IS RENEWAL DATE OF DATABASE) (PAYMENT UNTIL: 20100820)	
状态	2009-05-21	FPAY +	RENEWAL FEE PAYMENT (PRS DATE IS RENEWAL DATE OF DATABASE) (PAYMENT UNTIL: 20090820)	
状态	2008-07-01	FPAY +	RENEWAL FEE PAYMENT (PRS DATE IS RENEWAL DATE OF DATABASE) (PAYMENT UNTIL: 20090820)	
状态	2007-06-26	FPAY +	RENEWAL FEE PAYMENT (PRS DATE IS RENEWAL DATE OF DATABASE) (PAYMENT UNTIL: 20080820)	
状态	2004-08-20	R150 +	CERTIFICATE OF PATENT (=GRANT) OR REGISTRATION OF UTILITY MODEL (JAPANESE INTERMEDIATE CODE: R150)	
状态	2004-08-19	A61 +	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE) (JAPANESE INTERMEDIATE CODE: A61) (2004-08-02)	
状态	2004-07-21	A01 +	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL) (JAPANESE INTERMEDIATE CODE: A01) (2004-07-20)	
状态	2004-07-14	TRDD +	DECISION OF GRANT OR REJECTION WRITTEN	



重点技术分析：查看法律状态

		Patent Vital Signs															
	# Records		Number	Legal Status (most recent +/-)	Legal Status (year of most recent +/-)	Years Remaining (Earliest Priority Year + 2)	Years Remaining (Publication Year + 10 -)	APPLICATIONS									
	#	Instances						GRANTS	UTILITIES	Grant - probably active with positive (+) LLS	Grant - probably active no +/- LLS	Grant - probably active with negative (-) LLS	Grant - probably expired (20 years)	App - probably active with positive (+) LLS	App - probably active no +/- LLS	App - probably active with negative (-) LLS	App - probably expired (10 years)
1	1	1	CN10436028	+	2015		10	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2	1	1	EP2884646A	+	2015		10	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3	1	1	CN20425259					☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4	1	1	CN20425259					☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5	1	1	CN20425259					☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6	1	1	IN201500465				10	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7	1	1	CN10450555				10	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
8	1	1	CN10449440				10	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
9	1	1	CN10449441				10	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
10	1	1	CN10449445				10	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
11	1	1	CN10449446				10	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
12	1	1	CN10449454				10	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
13	1	1	CN10449475				10	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
14	1	1	WO20150834				10	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
15	1	1	CN20423618					☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
16	1	1	US20150160				10	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
17	1	1	JP201510771				10	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
18	1	1	CN20424164					☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
19	1	1	CN20425376					☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
20	1	1	CN20425447					☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
21	1	1	CN20425476					☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

三方或四方专利

Patent Assignees (cleaned) (Top 10)	Priority Years (earliest) (Last 15)	Derwent Accession Number (CoOccurrence)	Num Records
SAMSUNG ELECTRONICS CO LTD	2013	Tri	7
SAMSUNG ELECTRONICS CO LTD	2012	Tri	13
SAMSUNG ELECTRONICS CO LTD	2011	Tri	8
ALCATEL LUCENT	2013	Tri	8
ALCATEL LUCENT	2012	Tri	10
ALCATEL LUCENT	2011	Tri	6
LG ELECTRONICS INC	2012	Tri	2
BROADCOM CORP	2013	Tri	9
BROADCOM CORP	2012	Tri	3
NTT DOCOMO INC	2013	Tri	9
NTT DOCOMO INC	2015	Tri	1
UNIV KOREA NAT TRANSPORTATION IACF	2011	Tri	8
ELECTRONICS & TELECOM RES INST	2013	Tri	3
ELECTRONICS & TELECOM RES INST	2012	Tri	5
UNIV YONSEI IND ACADEMIC COOP FOUND	2013	Tri	2
AHN J Y	2012	Tri	5

Patent Assignees (cleaned) (Top 10)	Priority Years (earliest) (Last 15)	Derwent Accession Number (CoOccurrence)	Num Records
SAMSUNG ELECTRONICS CO LTD	2013	Quad	8
SAMSUNG ELECTRONICS CO LTD	2012	Quad	13
SAMSUNG ELECTRONICS CO LTD	2011	Quad	8
ALCATEL LUCENT	2013	Quad	13
ALCATEL LUCENT	2012	Quad	10
ALCATEL LUCENT	2011	Quad	6
UNIV SOUTHEAST	2013	Quad	6
UNIV SOUTHEAST	2014	Quad	10
LG ELECTRONICS INC	2012	Quad	2
BROADCOM CORP	2013	Quad	9
BROADCOM CORP	2012	Quad	3
NTT DOCOMO INC	2013	Quad	9
NTT DOCOMO INC	2015	Quad	1
UNIV KOREA NAT TRANSPORTATION IACF	2011	Quad	8
ELECTRONICS & TELECOM RES INST	2013	Quad	3
ELECTRONICS & TELECOM RES INST	2012	Quad	5
UNIV YONSEI IND ACADEMIC COOP FOUND	2013	Quad	2
AHN J Y	2012	Quad	5

大纲

1. 总体态势分析
2. 重点国家分析
3. 重要厂商分析
4. 具体技术分析
5. 核心专利分析

从什么角度衡量专利数据库的好坏？

- I 数据源是否可靠、全面；
- II 对所收录文献的揭示是否充分
- III 界面的易用性

I. TI数据源全面、可靠

德温特对其中48家审查机构的专利进行了编辑加工

DWPI和DPCI增值数据



90多个国家/地区专利审查机构的数据，比如

欧美专利

美国申请与授权专利

欧洲申请与授权专利

德国申请与授权专利

德国实用新型专利

加拿大申请与授权专利

英国申请与授权专利

法国申请与授权专利

PCT专利

INPADOC 数据库 (90多个国家)

英译亚洲专利

中国申请与授权专利

日本申请与授权专利

韩国申请与授权专利

越南申请与授权专利

马来西亚授权专利

泰国授权/已审专利

欧美专利法律状态

美国专利法律状态数据库

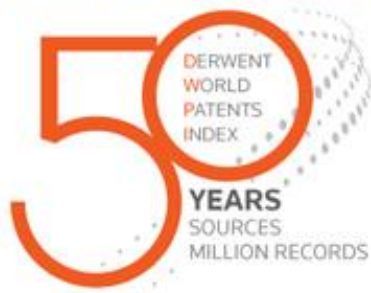
INPADOC DB专利法律状态数据库



德温特世界专利索引-专利世界的**旗舰**数据库

Derwent World Patents Index[®] (DWPISM)

DWPI 50 YEAR TIMELINE



50年专利分析经验积累

48家专利机构的数据，覆盖96%的专利

300多名各领域学者和专家**人工**编制

最被**信赖**的专利信息



Monty Hyams (1918-2013)



II 对所收录文献的揭示是否充分

- 标题-DWPI
- 标题词-DWPI
- 摘要-DWPI
- ...摘要-DWPI 新颖性
- ...摘要-DWPI 详细描述
- ...摘要-DWPI 生物活性
- ...摘要-DWPI 生物学机制
- ...摘要-DWPI 用途
- ...摘要-DWPI 优势
- ...摘要-DWPI 技术要点
- ...摘要-DWPI 附图说明
- 权利要求第一项-DWPI
- 专利权人/申请人-DWPI
- 专利权人代码-DWPI
- 发明人-DWPI
- DWPI入藏号
- DWPI相关入藏号
- DWPI更新
- 最早优先权国家/地区-DWPI
- 优先权日-DWPI
- 最早优先权年-DWPI
- DWPI同族专利国家/地区计数
- DWPI同族专利成员计数
- 相关专利申请号-DWPI
- 相关公开号-DWPI
- 相关专利申请日期-DWPI
- DWPI分类
- DWPI手工代码

DWPI增值信息字段

- 标题/摘要
- 标题/摘要/权利要求
- 标题
- ...标题-原文
- ...标题-原文(英语)
- ...标题-原文(法语)
- ...标题-原文(德语)
- ...标题-原文(西班牙语)
- 摘要
- ...摘要-原文
- ...摘要-原文(英语)
- ...摘要-原文(法语)
- ...摘要-原文(德语)
- ...摘要-原文(西班牙语)
- 权利要求
- ...权利要求(英语)
- ...权利要求(法语)
- ...权利要求(德语)
- ...权利要求(西班牙语)
- 说明书
- 美国政府投资研发
- 专利权人/申请人
- ...专利权人/申请人-原始
- ...专利权人/申请人-标准化
- 发明人
- 代理人/代理机构
- 审查员
- 公开号
- 国家/地区代码
- 专利文件类型标识码
- 公开日期
- 公开年
- 申请号
- 申请国家/地区
- 申请日期
- 申请年
- 优先权-数据
- ...优先权-编号
- ...优先权国家/地区
- ...优先权日
- ...优先权-最早
- ...优先权年
- 相关专利申请
- PCT申请
- 全部IPC
- ...IPC-现版
- ...IPC-原始
- 美国分类
- ...美国分类-现版
- ...美国分类-现版主类
- ...美国分类-原始
- 全部IPC或ECLA
- ECLA
- 洛迦诺分类
- 日本FI分类号
- 引用
- ...引用的专利
- ...相关性分类
- ...引用的非专利

原始专利信息字段

- INPADOC法律状态
- 美国专利维持状态
- 美国专利转让
- 美国专利转让受让人
- 美国专利转让转出者
- 指定国/地区
- 语言
- 诉讼
- ...原告人
- ...被告人
- ...美国专利办法后状态
- ...异议
- ...许可
- EPO审查程序状态

法律信息字段 60

德温特加工数据主要解决以下问题

- A. 语言不统一
- B. 专利文本晦涩难懂
- C. 大量专利重复报道
- D. 技术分类多样化
- E. 专利权人变体众多
- F. 提供引文信息

B DWPI标题和摘要重新改写后更通俗易懂

DWPI标题比原始文献提供更多的技术特征和关键词，并尽量改写成通俗的语言，使检索更精准

US008382430B2

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

(10) **Patent No.:** US 8,382,430 B2
(45) **Date of Patent:** Feb. 26, 2013

(54) **AEROENGINE**

(75) **Inventors:** Anthony Brian Parry, Derby (GB); Nicholas Howarth, Derby (GB); Mark David Taylor, Ashbourne (GB)

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,126,221 A	*	8/1938	Sessums	416/1
3,747,343 A		7/1973	Rosen	
4,131,387 A		12/1978	Kazin et al.	
4,883,240 A		11/1989	Adamson et al.	
4,958,289 A	*	9/1990	Sum et al.	701/99
5,054,998 A	*	10/1991	Davenport	416/1
2010/0206982 A1	*	8/2010	Moore et al.	244/62

FOREIGN PATENT DOCUMENTS

EP	1 340 903 A2	9/2003
GB	2 175 652 A	12/1986
GB	2 179 706 A	3/1987
GB	2 254 661 A	10/1992

(21) Appl. No.: 12/449,196
(22) PCT Filed: Feb. 6, 2008
(86) PCT No.: PCT/GB2008/000401
§ 371 (c)(1), (2), (4) Date: Oct. 22, 2009
(87) PCT Pub. No.: WO2008/096124
PCT Pub. Date: Aug. 14, 2008
(65) **Prior Publication Data**
US 2010/0047068 A1 Feb. 25, 2010
(30) **Foreign Application Priority Data**
Feb. 10, 2007 (GB) 0702608.1
(51) Int. Cl. B64C 11/48 (2006.01)
(52) U.S. Cl. 416/1; 416/128; 416/201 R; 416/203
(58) **Field of Classification Search** 416/1, 128, 416/201 R, 203; 415/65, 66, 68, 119
See application file for complete search history.

(74) **Attorney, Agent, or Firm** — Oliff & Berridge, PLLC

(57) **ABSTRACT**
A method of operating a contra-rotating propeller engine that preferably comprises a 12 bladed front and a 9 bladed rear propeller. As is conventional, the engine is operated during at least a take-off phase, a cruise phase and an approach phase; during the cruise phase the engine operates with a generally constant propeller tip speed. The method is characterized by the step of operating the engine such that the tip speed of either or both of the propellers, during at least one of take-off, climb or approach, at least 10% greater than cruise tip speed. With a specific front to rear propeller spacing, increasing the tip speed reduces overall noise generated by the propellers.

12 Claims, 3 Drawing Sheets

DWPI 标题

Method for operating contra-rotating propeller engine(对转螺旋桨发动机) involves climbing or approaching at greater tip speed than cruise tip speed, during take-off

DWPI 摘要

新颖性: The method involves operating the gas turbine engine (10) during at least a take-off, climb, cruise phase and an approach phase. The engine operates with a generally constant propeller tip speed, during the cruise phase. The tip speed of at least one of the propellers is operated, during at least one of take-off, climb or approach at a greater tip speed than cruise tip speed.

用途: Method for operating a contra-rotating propeller engine (claimed).

优势: Enables the reduction of the noise generated by the engine for a given power rating. Enables the reduction of the weight of the engine without reducing the aerodynamic performance requirements and reduction in the power of the engine.

原文标题只有一个单词

原文简短摘要

风力发电领域的一篇美国专利

DWPI摘要是基于专利全文的提炼，并段落化专利的不同方面，极大提高了专利研读的效率

C 大量专利重复报道

申请号/申请日期 ?

JP1996192187A / 1996-07-22

同族专利

同族专利 ?

+ 展开 INPADOC 同族专利 (19)

+ 展开 DWPI 同族专利 (10); 国家/地区 (5)

同族专利

折叠 INPADOC 同族专利 (19) 作为检索结果查看

公开号	公开日期	发明人 DWPI	DWPI 专利收入 / 申请人	DWPI 标题
JP102429A	1997-04-15	ARISAKA S	SUMITOMO DENSO KK	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
DE69711963D1	2002-05-23	ARISAKA S	SUMITOMO DENSO KK	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
DE69711963T2	2002-11-28	-	-	-
DE69714879D1	2002-10-02	ARISAKA S	SUMITOMO DENSO KK	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
DE69714879T2	2003-05-08	-	-	-
EP1061631A1	2000-12-20	ARISAKA S	SUMITOMO DENSO KK	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP788211A2	1997-08-06	ARISAKA S	SUMITOMO DENSO KK	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP788211A3	1998-02-04	-	-	-
EP788211B1	2002-08-28	ARISAKA S	SUMITOMO DENSO KK	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP788212A2	1997-08-06	ARISAKA S	SUMITOMO DENSO KK	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP788212A3	1998-02-04	-	-	-
EP788212B1	2002-04-17	ARISAKA S	SUMITOMO DENSO KK	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP788212A2	1997-08-06	ARISAKA S	SUMITOMO DENSO KK	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil
EP788212A3	1998-02-04	-	-	-
EP788212B1	2002-04-17	ARISAKA S	SUMITOMO DENSO KK	Connection system for charging battery of electric automotive vehicle e.g. car has primary coil unit which is electromagnetically coupled to secondary coil unit for inducing current in secondary coil

折叠 DWPI 同族专利 (10); 国家/地区 (5) 作为检索结果查看

出版物	DWPI 更新	公开日期	IPC 码	语言
JP9102429A *	199725	1997-04-15	H01F003814	Japanese
Local Applications: JP1996192187A filed 1996-07-22				
EP788211A2 =	199736	1997-08-06	B60L001118	English
Designated States: (Regional) DE FR GB				
Local Applications: EP1997101385A filed 1997-01-29				
EP788212A2 =	199736	1997-08-06	B60L001118	English
Designated States: (Regional) DE FR GB				
Local Applications: EP1997101386A filed 1997-01-29				
US5821731A =	199848	1998-10-13	B60L001118	English
Local Applications: US1997791110A filed 1997-01-30				
US5850135A	199906	1998-12-15	B60L001118	English
Local Applications: US1997791109A filed 1997-01-30				
EP1061631A1 =	200105	2000-12-20	H02J000702	English
Designated States: (Regional) DE FR GB				
Local Applications: EP1997101386A filed 1997-01-29				
EP2000114922A filed 1997-01-29				
EP788212B1 =	200227	2002-04-17	B60L001118	English
Designated States: (Regional) DE FR GB				
Local Applications: EP2000114922A filed 1997-01-29				
EP1997101386A filed 1997-01-29				
DE69711963D1 =	200241	2002-05-23	H02J000700	German
Local Applications: EP1997101386A filed 1997-01-29				
based on EP788212				
DE69711963A filed 1997-01-29				
EP788211B1 =	200264	2002-08-28	B60L001118	English
Designated States: (Regional) DE FR GB				
Local Applications: EP1997101385A filed 1997-01-29				
DE69714879D1 =	200273	2002-10-02	H02J000700	German

不仅考察专利的优先权说明项，更把“同一发明内容”作为判断的最终标准



D 专利分类体系多样化



DWPI class

DWPI manual codes

全部IPC any IPC - IPC-current(现版)
IPC-original(原始)

全部CPC - CPC现版

美国分类 US Class - US class-current - US class-current main(现版主类)
US class -original

any IPC or ECLA

ECLA

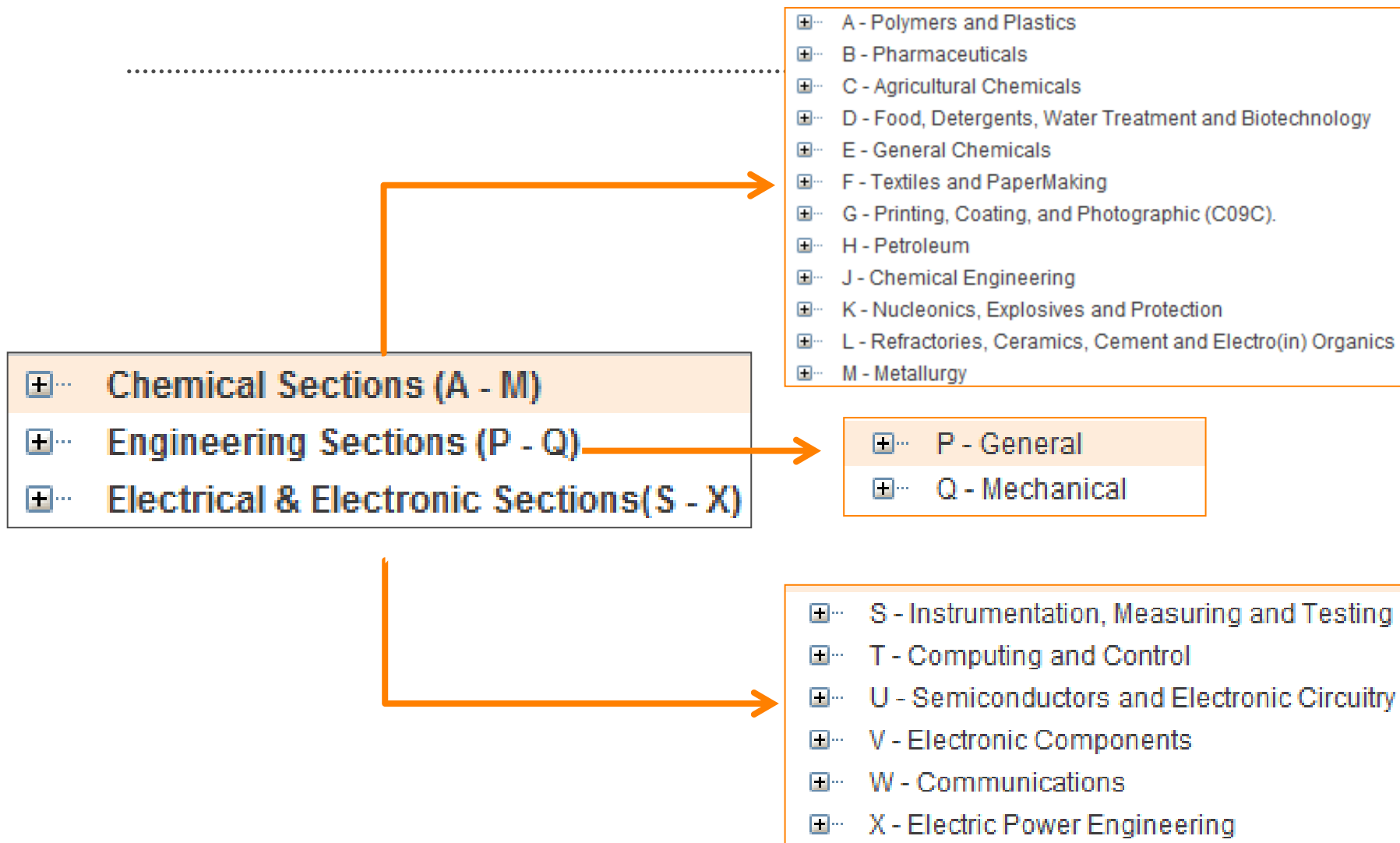
洛迦诺分类 locarno class

日本FI分类号 JP FI codes

JP F terms

TI除了已有的IPC、ECLA、CPC等分类体系外，还内嵌了DWPI的两种分类代码（DWPI Class和Manual Code），供专利情报人员更多选择

D 专利分类体系多样化-德温特分类代码



D 专利分类体系多样化-德温特手工代码

浏览德温特手工代码分层结构

注释: **添加** = 添加到检索式 **s** = 查看物质详细信息

- +... Section A: Plasdoc
- +... Section B: Farmdoc
- +... Section C: Agdoc
- +... Section D: Food, Fermentation, Disinfectants, Detergents
- +... Section E: Chemdoc
- +... Section F: Textiles, Paper, Cellulose
- +... Section G: Printing, Coating, Photographic
- +... Section H: Petroleum
- +... Section J: Chemical Engineering
- +... Section K: Nucleonics, Explosives, Protection
- +... Section L: Glass, Ceramics, Electro(in)organics
- +... Section M: Metallurgy
- +... Section N: Catalysts
- +... Section Q: Vehicles
- +... Section S: Instrumentation, Measuring, and Testing
- +... Section T: Computing and Control
- +... Section U: Semiconductors and Electronic Circuitry
- +... Section V: Electronic Components
- +... Section W: Communications
- +... Section X: Electric Power Engineering

- 比德温特分类代码更为详细, 约2.2万多个手工代码
- 根据专利文献的文摘和全文对**发明的应用和发明的重要特点**进行标引
- **提高检索的全面性和准确性**
 - 标引的一致性很高
 - 适应于科研人员的习惯和应用
- 直接提供手工代码的检索辅助工具

DWPI手工代码

- | **Q13** 动力系/变速箱及相关控制(Powertrain/transmission systems and their control)
- | — **Q13-A** 动力系/变速箱(Powertrain/Transmission systems)
- | — — **Q13-A01** 变速箱类型(Transmission type)
- | — — — **Q13-A01A** 自动变速箱 (Automatic transmission)
- | — — — — **Q13-A01A1双离合变速箱 (Double clutch transmission)**
- | — — — **Q13-A01C** 无级变速箱 (Continuously variable transmission,CVT)
- | — — — **Q13-A01E** 半自动变速器 (Semi-automatic)
- | — — — **Q13-A01M** 手动变速箱 (Manual transmission)
- | — — — **Q13-A01X** 其他变速箱类型(Other transmission types)

IPC

- | **B60** 一般车辆
- | — **B60W** 不同类型或不同功能的车辆子系统的联合控制；专门适用于混合动力车辆的控制系统；不与某一特定子系统的控制相关联的道路车辆驾驶控制系统
- | — — **B60W10/00** 不同类型或不同功能的车辆子系统的联合控制（用于以车辆内部电源提供纯电力牵引的车辆的内B60L11/00）
- | — — — **B60W 10/11** 阶梯传动装置
- | — — — — **B60W 10/111** 包括单独的变速用齿轮系串联排列的
- | — — — — **B60W 10/113** 包括两个输入流路，例如**双离合变速箱**的选择相应的输入离合器的转矩流路
- | — — — — **B60W 10/115** 包括行星齿轮

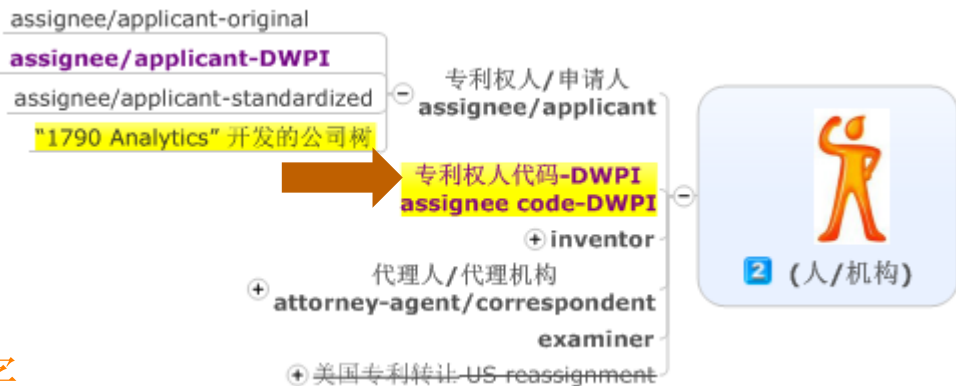


E 专利权人变体众多

DWPI改写的“专利权人代码”是指分配给所收录公司的唯一4位字母识别码，涵盖了全球约2.2万家公司。检索这些代码可获取指定公司的子公司及相关控股信息。

- ❖ 标准专利权人代码 - DWPI (允许但不是必须使用 C 后缀)
- ❖ 非标准专利权人代码 - DWPI (N)
- ❖ 个人专利权人代码 - DWPI (I)
- ❖ 俄国专利权人代码 - DWPI (R)

比如：VAUDRIN D C (VAUD-I)
OSTMA MASCH (OSTM-N)



DWPI改写后：IBMC

CIE IBM FRAMCE

CIE IBM FRANCE

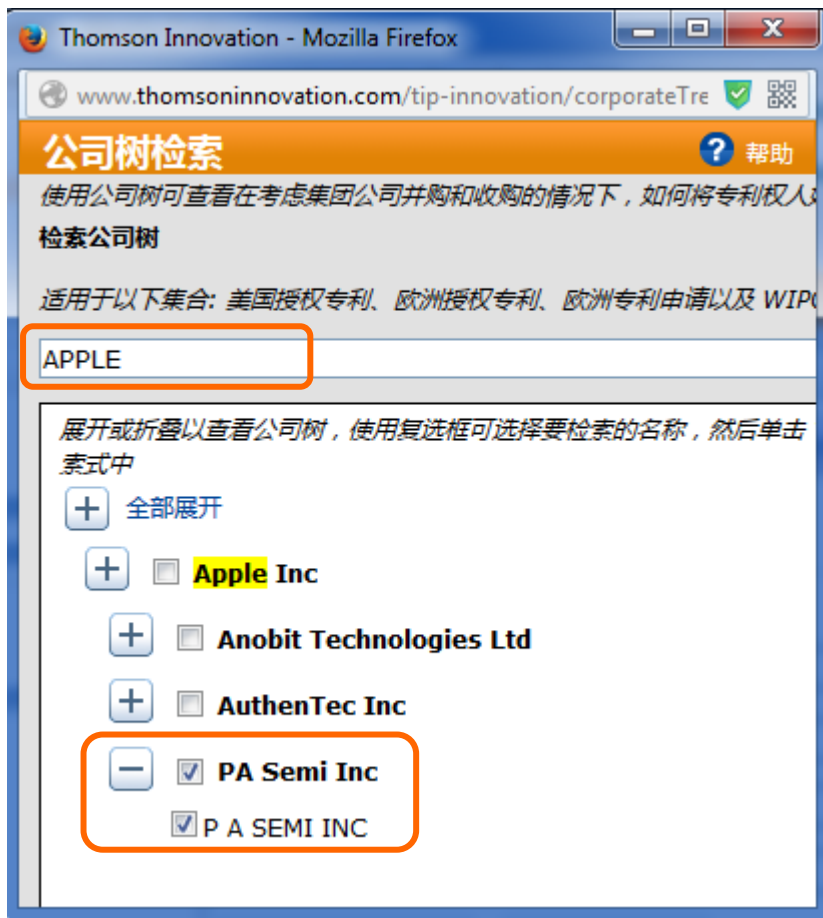
IBM BUSINESS CONSULTING SERVICES KK

IBM CANADA LTD

IBM CHINA CO LTD

IBM ISRAEL LTD.....

E 专利权人变体众多



assignee/applicant-original

assignee/applicant-DWPI

assignee/applicant-standardized

"1790 Analytics" 开发的公司树



专利权人/申请人
assignee/applicant

专利权人代码-DWPI
assignee code-DWPI

+ inventor

代理人/代理机构

+ attorney-agent/correspondent

examiner

+ 美国专利转让-US reassignment



公司树适合检索 US 和 EP 授权专利以及 EP 和 WIPO 专利申请，在“专利权人/申请人”中可使用公司树检索。对于这些专利授予机构，公司树整理了全球专利量较大的前2,500家公司，并考虑了集团公司**并购、收购、资产剥离和别名**（但不包括转让）情况



F 提供引文信息

The screenshot shows a web browser window titled "Thomson Innovation - Mozilla Firefox" with the URL www.thomsoninnovation.com/tip-innovation/recordView.do?category=PAT&datasource=T3&d. The page title is "专利记录视图 - WO1999049029A1" and the main heading is "记录视图: WO1999049029A1".

Navigation links include: 添加至工作文件 | 标记记录 | 监控记录 | 下载 | 翻译 | 引证关系图 | 高亮显示 | 打印

Menu items: 完整浏览 跳转至: 著录项目 摘要 分类/索引 法律状态 同族专利 权利要求 说明书 引用 其他

引用

引用 ? 记录级别

- + 展开 施引专利 (319)
- + 展开 引用的专利 (1)
- + 展开 引用的非专利 (9)

DPCI 引用 ? 同族专利级别

- + 展开 DPCI 施引专利 (367)
- + 展开 DPCI 引用的专利 (265)
- + 展开 DPCI 引用的非专利 (1472)
- + 展开 DPCI 引用计数

Page footer: 第 1 条记录, 共 10986 条 | 1 2 3 4 5 6 7 | 标记 | 转至该页

TI不但收录专利，而且还将专利的引文信息加入，来自发明人及专利审查员的引用都会标注出来。

来自记录级别的引用和施引

来自于家族的引用和施引



F 提供引文信息

引用

引用的非专利 - DPCI

引用的专利 - DPCI

.. 引用的专利国家/地区 - DPCI

.. 引用的专利文献类型识别代码 - DPCI

.. 引用的专利公开日期 - DPCI

.... 引用的专利公开年 - DPCI

.. 引用的专利相关性分类 - DPCI

.. 引用的专利来源 - DPCI

引用的专利入藏号 - DPCI

引用的专利权人代码 - DPCI

引用的专利权人 - DPCI

引用的专利发明人 - DPCI

引用的入藏号计数 - DPCI

引用的专利授予机构计数 - DPCI

引用的非专利计数 - DPCI

引用的专利计数 - DPCI

施引专利 - DPCI

.. 施引专利国家/地区 - DPCI

.. 施引专利文献类型识别代码 - DPCI

.. 施引专利公开日期 - DPCI

.... 施引专利公开年 - DPCI

.. 施引专利相关性分类 - DPCI

.. 施引专利来源 - DPCI

施引专利入藏号 - DPCI

施引专利权人代码 - DPCI

施引专利权人 - DPCI

施引专利发明人 - DPCI

施引入藏号计数 - DPCI

施引专利授予机构计数 - DPCI

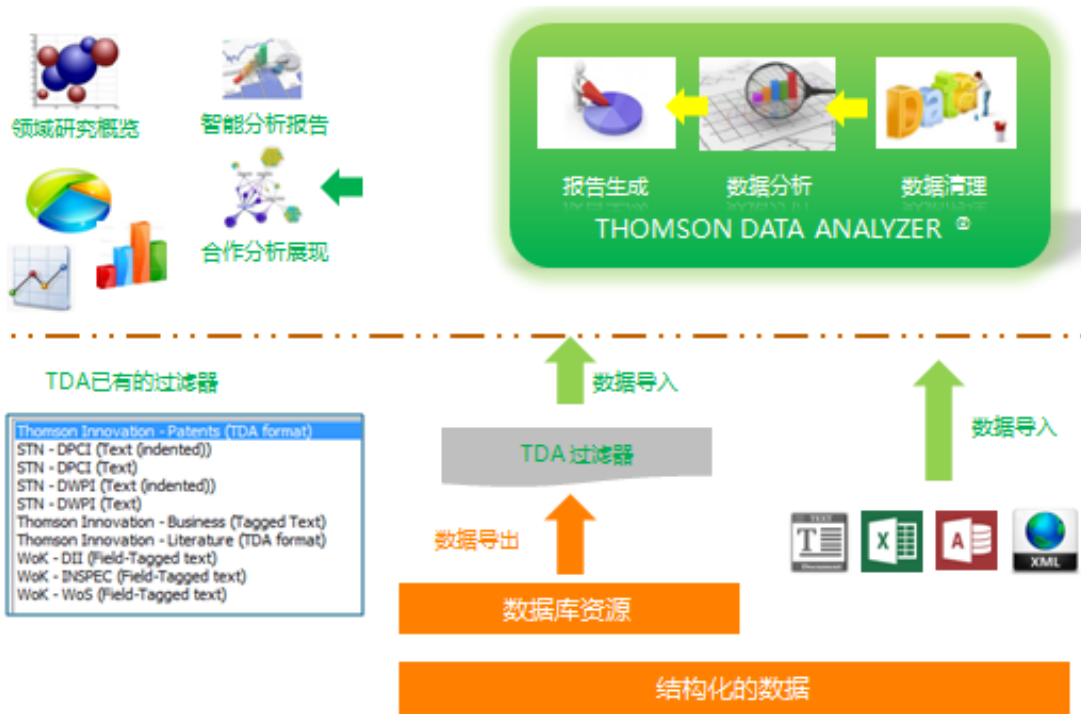
施引专利计数 - DPCI

因为加工了引文信息，所以，在TI检索界面可实现对参考文献及施引文献的检索。

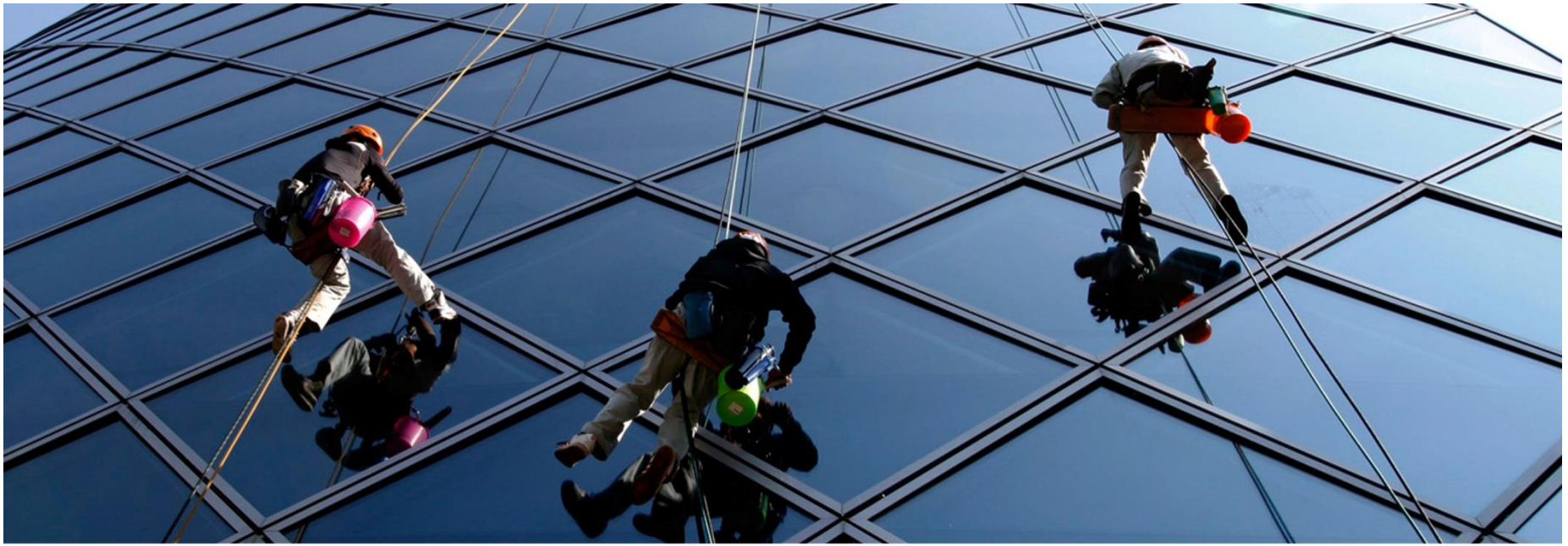
非专利信息单独标出，有助于探索科技论文与专利之间，基础研究与应用研究的发展轨迹



TDA的特点及作用



Thomson Data Analyzer (TDA)是情报挖掘和分析软件，它本身并不包含任何数据，也不检索任何数据库。数据导入TDA后，可以对文本数据进行多角度的数据挖掘和可视化分析。TDA能够帮助您从大量的专利文献或科技文献中发现竞争情报和技术情报，为洞察科学技术的发展趋势、发现行业出现的新兴技术、寻找合作伙伴，确定研究战略和发展方向提供有价值依据。



REUTERS/Yuriko Nakao

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