

THE HARMONY OF THE SPHERES: BRINGING TOGETHER TOOLS AND TECHNIQUES FOR PATENT ANALYSIS

II-SDV 2012
Nice 16-17 April 2012

Bob Stembridge
Customer Relations Manager, IP & Science
Thomson Reuters

Copyright Thomson Reuters 2012 – Do Not Distribute



THOMSON REUTERS

AGENDA

- TODAY'S IP UNIVERSE
- THE IP INFORMATION PROFESSIONAL AS CONDUCTOR
- KEY TOOLS & TECHNIQUES
 - Landscaping
 - Trend analysis
 - Competitive intelligence
 - Technology intelligence
 - Licensing/partnership analysis
 - Staying in tune

TODAY'S IP UNIVERSE

theguardian Nortel patents sold for \$4.5bn

The Economist Valuing patents: Doing the maths

FT.com FINANCIAL TIMES Battle set for Kodak's patent portfolio

The New York Times A Bull Market in Tech Patents

Forbes Pfizer Profits Halved As Lipitor Comes Off Patent

IP INFORMATION PROFESSIONAL AS CONDUCTOR



“The task of the professional patent searcher is to understand the complex mix of science, law and information retrieval skills which enables the industrial user to make sense of the documents and to exploit their contents effectively”

Stephen Adams



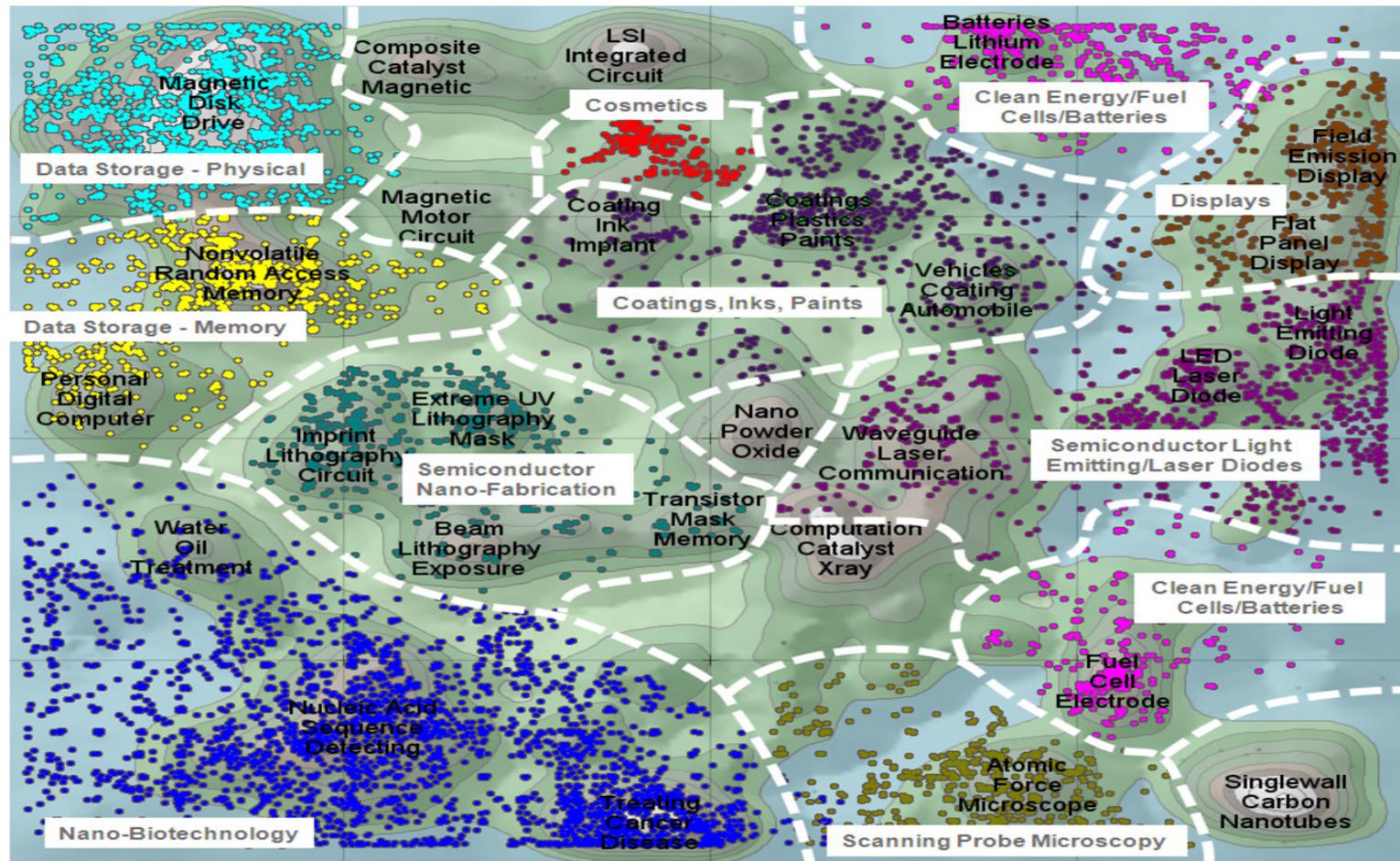
BUSINESS DECISION SUPPORT

- What does the technology landscape look like?
- What are the trends in innovation?
- Where do inventions originate?
- Who owns what?
- Who is active now?
- Who covers specific technical aspects?
- Which are the high impact inventions?
- Are there licensing or collaboration opportunities?

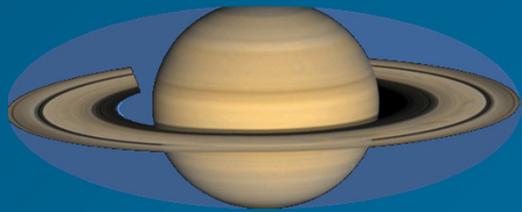


KEY TOOLS & TECHNIQUES: LANDSCAPING

WHAT DOES THE TECHNOLOGY LANDSCAPE LOOK LIKE?

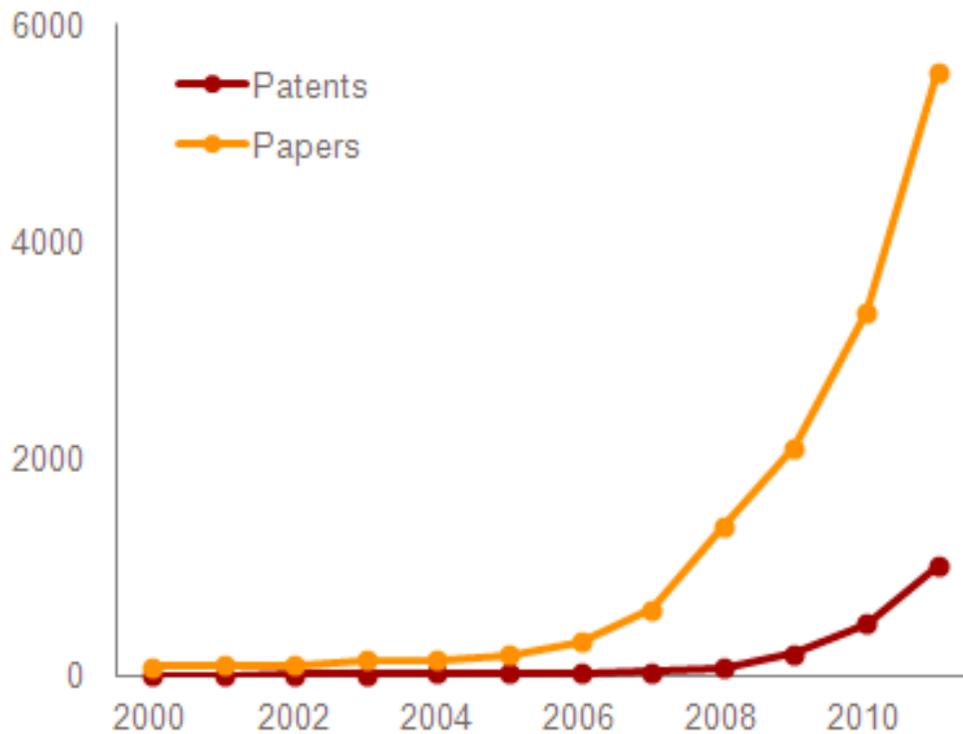


Source: Thomson Innovation ThemeScape Map

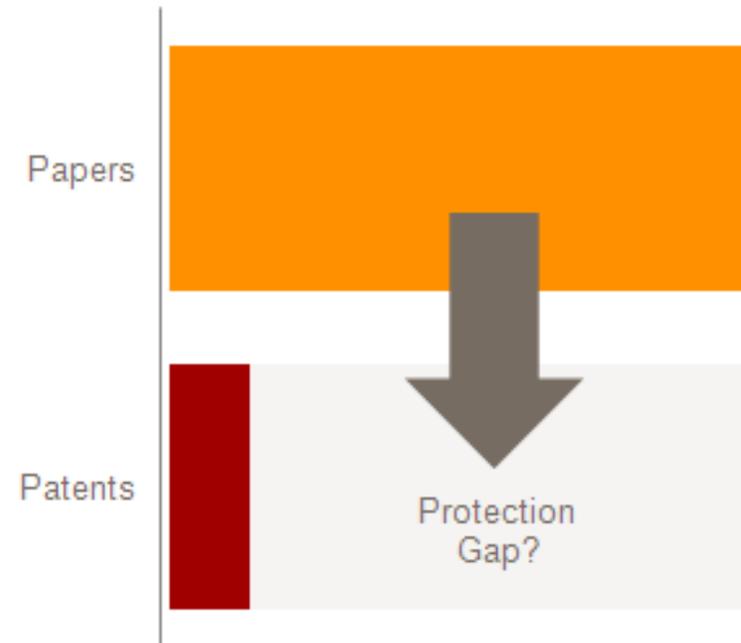


KEY TOOLS & TECHNIQUES: TREND ANALYSIS

IS THIS AN EMERGING TECHNOLOGY?



Source: Thomson Innovation



Scientific research precedes patent activity

PRIORITY COUNTRY TIMELINES

Priority Countries	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	Total Filings
United States of America	1	3	2	5	8	10	4	23	37	91	156	115	167	211	156	77	50	26	1142
Japan				2			1	5	9	30	78	60	112	132	102	58	44	12	645
European Patent Office		1	1	2	2	2	4	5	4	16	18	10	13	24	20	8	10	1	141
Korea, Republic of								1		2	4	5	14	17	22	11	2	3	81
France				1				1		1	4		7	2	6	5	4	2	33
Taiwan										2	3		4	7	6	2	5	2	31
Germany				1		1	4	2	4	2			2	3	4	1		2	26
United Kingdom						1		1		1		1	1	4	1	1	3	1	15
China											4			3			2	5	14

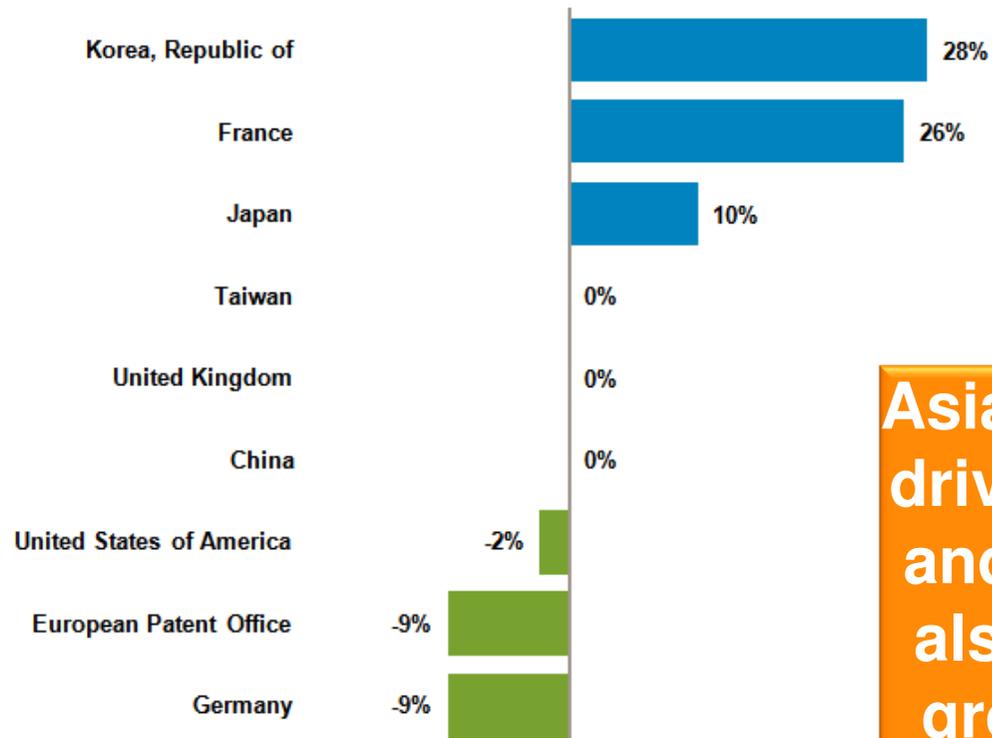
Source: Thomson Innovation & Thomson Data Analyzer

US and Japan lead development in this field, with other countries working at a much slower pace. Chinese patenting is very low



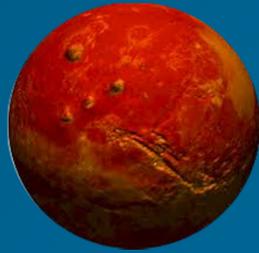
EMERGING COUNTRIES

**Compound Annual % Growth or Decline
2002-2008**



Asian growth has been driven by South Korea and Japan. There has also been significant growth from France.

Source: Thomson Innovation



KEY TOOLS & TECHNIQUES: COMPETITIVE ANALYSIS

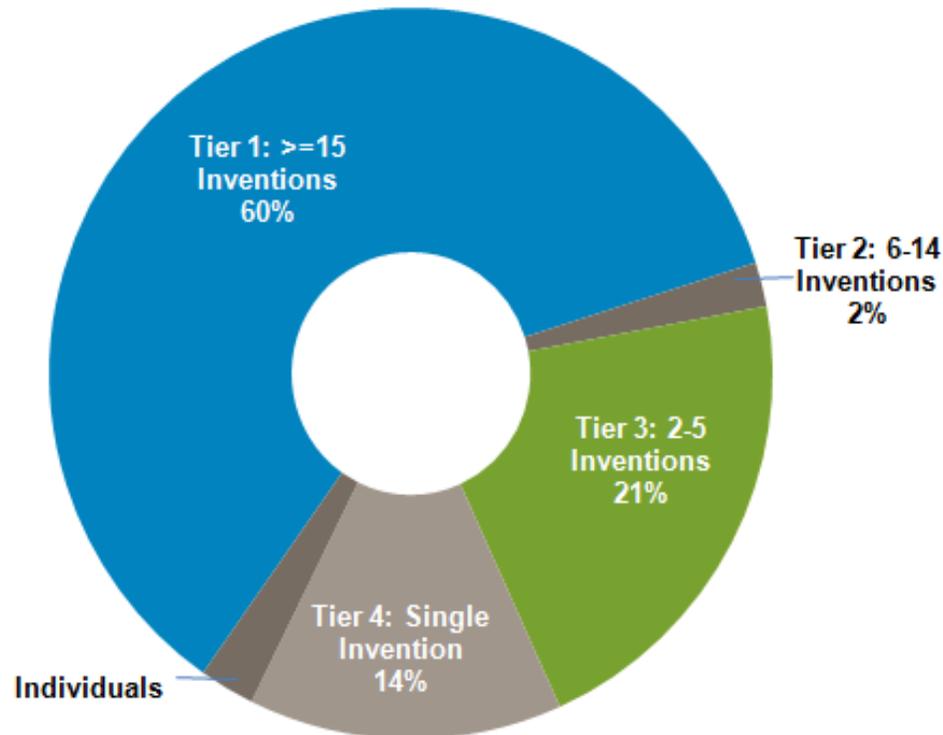
WHO ARE YOUR COMPETITORS?

Top Entities	01	02	03	04	05	06	07	08	Total
New Entrant						1	4	10	15
Company A	9	9	2	4	3	2	6	2	37
Company B	3	11	2	3	7	7	3	1	37
Company C	9	10	5	3	1	1		1	30
University	8	11	1	1		2	6		29
Dominant Player?	20	19	3	2	9	4	4		61
Company E	13	9	3	1			4		30
Company F	1	9	5		4	3	2		26

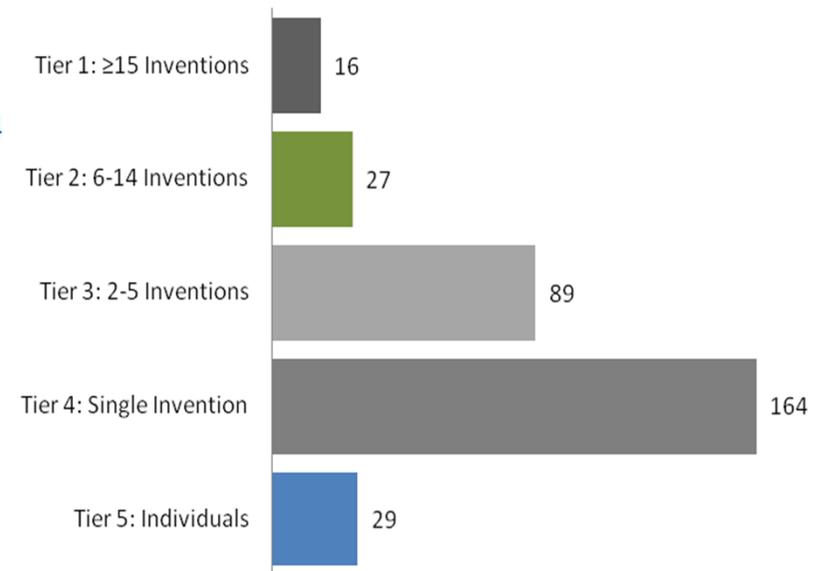
Source: Thomson Innovation & Thomson Data Analyzer

Who's more important – the dominant player (now inactive) or the new entrant?

HOW STIFF IS THE COMPETITION?



Number of Entities per Tier



Source: Thomson Innovation & Thomson Data Analyzer

**Rapidly and effectively assess
the nature of your competition**

TIER 1 ASSIGNEES

Tier 1 Entities	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	Total Inventions	% Filed in the last 3 years
TOSHIBA CORP								2		7	21	11	43	31	32	22	12	2	183	37.16%
SAMSUNG										2	3	4	11	15	21	9	1	2	68	48.53%
PANASONIC				2					1	1	9	9	7	12	12	5	4	4	66	37.88%
CANON									2	2	7	10	12	19	2	1			55	5.45%
SONY CORP								1	2	2	5	4	1	4	18	9	8		54	64.81%
CASIO								2	1	3	3	5	8	15	8				45	17.78%
SOCIETE BIC											8	7	8	8	3	3	1	1	39	20.51%
HITACHI LTD						1			1	2	2	7	12	7	1			1	34	5.88%
SANYO ELECTRIC											2		6	7	5		6	1	27	44.44%
EVEREADY BATTERY COMPANY									5	7	9	1		4					26	0.00%
NEC CORP											4	5	3	4	4	1	2	1	24	16.67%
FUJITSU LTD									1	1	1	3	3	6	5				20	25.00%
COMMISSARIAT ENERGIE ATOMIQUE								1		1	3		4	1	3	1	3	2	19	47.37%
MTI MICROFUEL CELLS INC									4	3	4	2		1	1	1			16	12.50%
TOYOTA CORP													4	3	6	1	2		16	56.25%
ULTRACELL CORP											7	5	1	3					16	0.00%

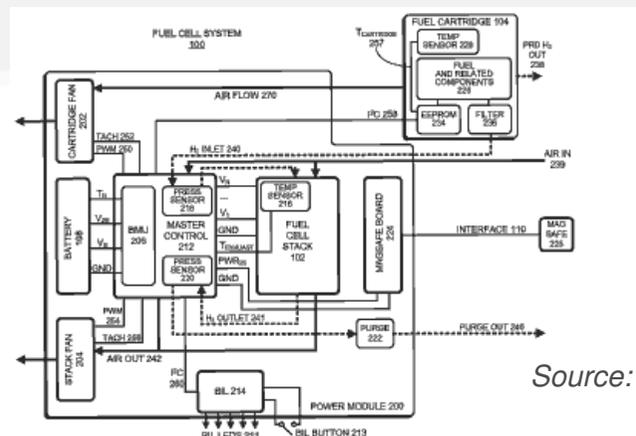
Source: Thomson Innovation & Thomson Data Analyzer

NEW ENTRANTS

Entities	Inventions
YOUNG GREEN ENERGY CO	6.0
APPLE INC	4.0
TAIWAN ATOMIC ENERGY COUNCIL	2.0
RESEARCH IN MOTION LTD	2.0
SONY ERICSSON MOBILE COMMUNICATIONS	2.0
UNIVERSITY OF TATUNG	2.0
ACAL ENERGY LTD	1.0
DONG JIN SEMICHEM CO LTD	1.0
ENERFUEL	1.0
JAPAN GORE-TEX INC	1.0

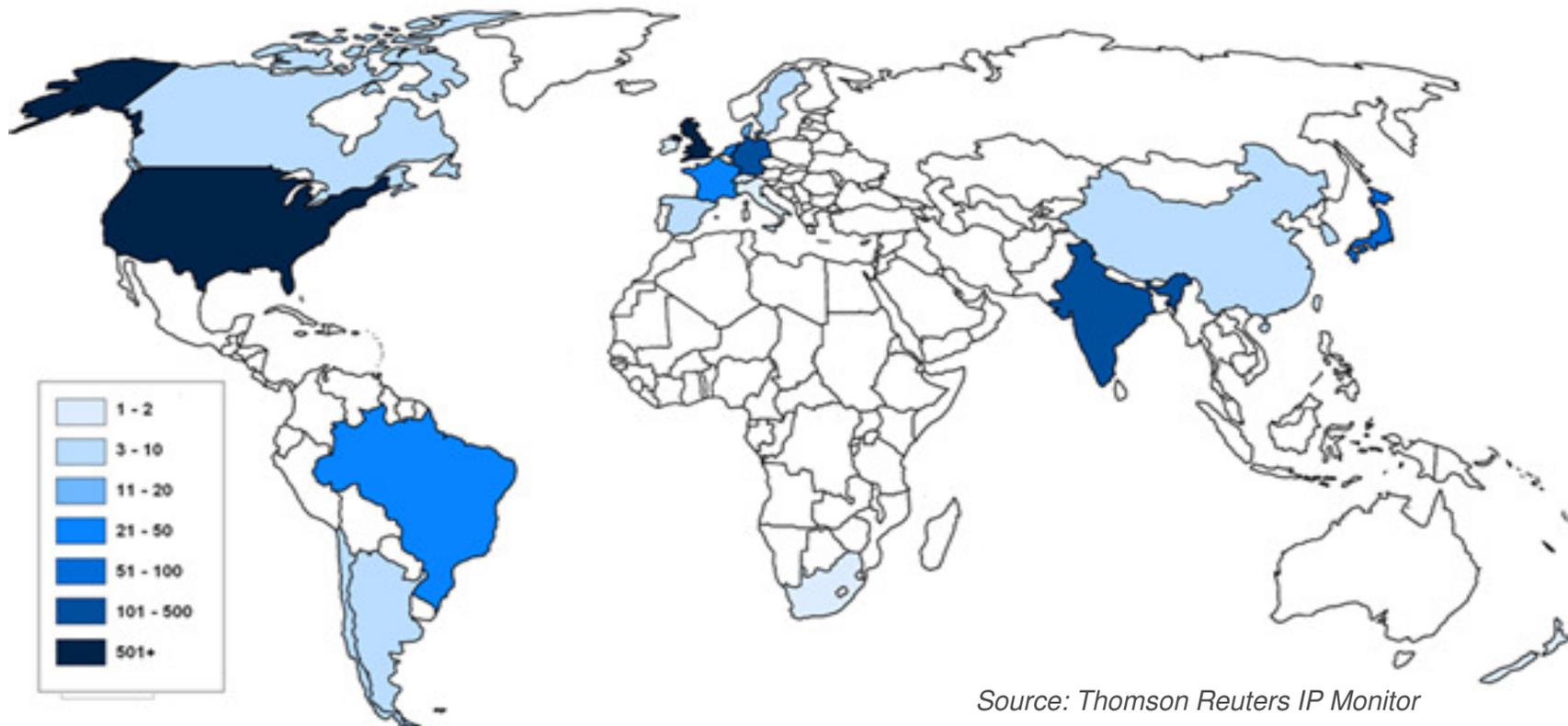
DWPI Title ?

Fuel cell system for portable computing device comprises fuel cell stack that converts fuel to electrical power; fuel source; controller that controls operation of system; and interface having power link and bidirectional communication link



Source: Thomson Innovation & Thomson Data Analyzer

WHERE IS COMPANY FILING?



**Map competitor's patent holdings
to see distribution of its IP portfolio**



KEY TOOLS & TECHNIQUES: TECHNOLOGY ANALYSIS

TECHNICAL CATEGORIES

	Technical Categories	Inventions
Application	1.01 Automotive	220
	1.02 Aerospace	54
	1.03 Military	30
	1.04 Medical	26
	1.05 Robotics	25
	1.06 Marine technology	18
	1.07 Mobile phone	864
	1.08 Laptop computers	797
	1.09 PDA and related devices	392
	1.10 Digital and video camera	347
	1.11 Portable audio devices	129
	1.12 Television and related devices	70
	1.13 Printer	22
	1.14 Wrist watch	16
Cell type	2.01 Direct methanol fuel cell DMFC	220
	2.02 Proton exchange membrane fuel cell PEMFC	96
	2.03 Solid oxide fuel cell SOFC	11
	2.04 Direct borohydride fuel cell DBFC	9
Attributes	3.01 Electrode design	233
	3.02 Fuel supply and control	225
	3.03 Fuel cartridge	138
	3.04 Oxygen supply	47
	3.05 Pumps	23
	3.06 Fuel reformer	16
	3.07 Carbon dioxide removal	13
	3.08 Water removal	2
	4.00 Manufacturing	42

TIER 1 ASSIGNEE INNOVATION FOCUS

Technical Categories		TOSHIBA CORP	SAMSUNG	PANASONIC	CANON	SONY CORP	CASIO	SOCIETE BIG	HITACHI LTD	SANYO ELECTRIC	EVEREADY BATTERY	NEC CORP	FUJITSU LTD	COMMISSARIAT ENERGIE	MTI MICROFUEL CELLS INC	TOYOTA CORP	ULTRACELL CORP
Application	1.01 Automotive	5	9	11	4	11	3	7	3	12	5		3			10	
	1.02 Aerospace	12	1	1		8		15				1					
	1.03 Military			1							1						5
	1.04 Medical				1		11			1							
	1.05 Robotics		1			7			1	3							
	1.06 Marine technology																
	1.07 Mobile phone	110	38	54	24	45	37	33	26	24	10	14	18	7	14	10	3
	1.08 Laptop computers	114	40	47	35	40	34	31	17	12	15	13	13	5	15	3	16
	1.09 PDA and related devices	39	30	31	9	27	38	25	9	17	13	7	6		2	1	3
	1.10 Digital and video camera	23	10	25	41	17	36	9	10	18	9	4	3			2	1
	1.11 Portable audio devices	21	5	4		6		14	1	11	2	2	2				4
	1.12 Television and related devices	3	1	1	10	3	10	12			2	1					1
	1.13 Printer	1			11	5											
	1.14 Wrist watch						16										
Cell type	2.01 Direct methanol fuel cell DMFC	81	8	27	1	9		2	8	5		2	3	1	12		2
	2.02 Proton exchange membrane fuel cell PEMFC	1	5	5	5	2		1	4	1	2	3	1	5		3	
	2.03 Solid oxide fuel cell SOFC						1				1						
	2.04 Direct borohydride fuel cell DBFC	1	1														
Attributes	3.01 Electrode design	23	17	13	10	16	2	1	8	2	4	9	5	3	5	2	1
	3.02 Fuel supply and control	42	10	11	14	10	11	5	4	8	2	2	2	2	3	1	1
	3.03 Fuel cartridge	19	8	7	5	4	11	6	1	3	7	2	3				4
	3.04 Oxygen supply	3		3	6	5	1					3	4			2	1
	3.05 Pumps	7	1	2			1		1						2		
	3.06 Fuel reformer	2	5				1					1					4
	3.07 Carbon dioxide removal					1	2					1	1		2		
	3.08 Water removal				1												
4.00 Manufacturing	1	3				1	1	1			1			1		2	1

Source: Thomson Innovation & Thomson Data Analyzer

CROSS-CORRELATING TECHNICAL CATEGORIES

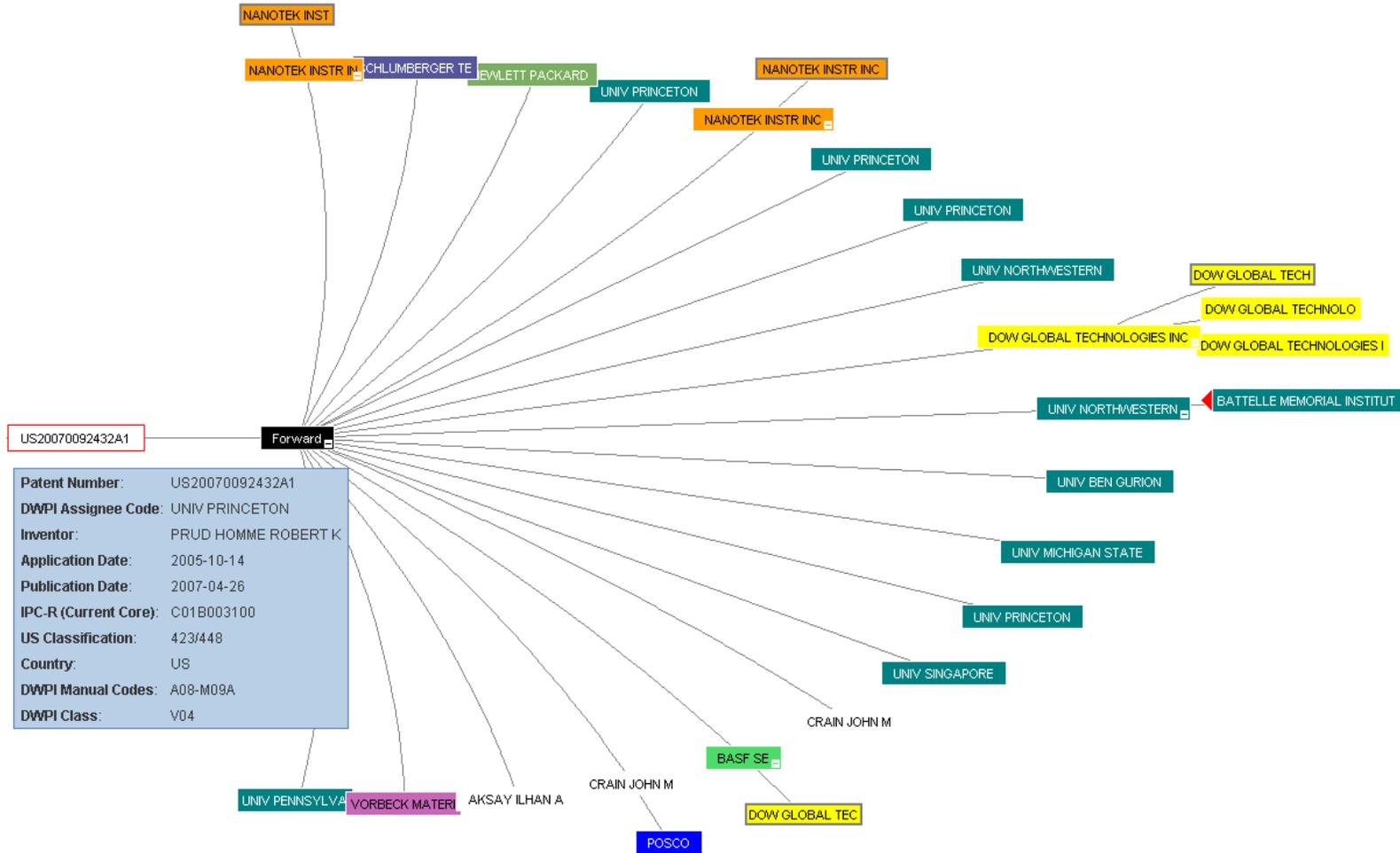
	1.01 Automotive	1.02 Aerospace	1.03 Military	1.04 Medical	1.05 Robotics	1.06 Marine technology	1.07 Mobile phone	1.08 Laptop computers	1.09 PDA and related devices	1.10 Digital and video camera	1.11 Portable audio devices	1.12 Television and related devices	1.13 Printer	1.14 Wrist watch	2.01 DMFC	2.02 PEMFC	2.03 SOFC	2.04 DBFC	3.01 Electrode design	3.02 Fuel supply and control	3.03 Fuel cartridge	3.04 Oxygen supply	3.05 Pumps	3.06 Fuel reformer	3.07 Carbon dioxide removal	3.08 Water removal	4.00 Manufacturing		
1.01 Automotive	220	22	7	2	17	18	158	134	62	76	29	17	2	2	19	35	4	1	51	25	3	8	2	1	11				
1.02 Aerospace	54	3	11	7	3	52	41	21	11	14	14	1			13	6	1		8	4	2	3						1	
1.03 Military	30	1	4	2	15	18	7	5	7	3	1				2	2	1		3	3	2	1		2				4	
1.04 Medical	26	1			25	24	16	4	7	12									4									2	
1.05 Robotics	25	2	22	16	7	13	5	5	2						3	2	1		6	4	1								
1.06 Marine technology	18	15	14	2	5	1									1	3			4	2	1	1							
1.07 Mobile phone	864	608	326	276	112	53	12	13	156	65	6	4	164	115	100	28	10	7	12	1	27								
1.08 Laptop computers	797	299	260	99	52	20	11	146	56	6	3	138	115	88	26	12	11	9	2	26									
1.09 PDA and related devices	392	198	70	37	7	16	57	18	4						51	76	48	9	4	6	3							7	
1.10 Digital and video camera	347	54	45	16	16	43	26	1	1						50	60	47	12	1	5	4							5	
1.11 Portable audio devices	129	26	4		21	7									20	14	17	2			1							3	
1.12 Television and related devices	70	14	5	3											7	11	3	6			1							2	
1.13 Printer	22														2	3	2	4											1
1.14 Wrist watch	16																		3	3									1
2.01 Direct methanol fuel cell DMFC	220														52	29	23	6	8	2	5								2
2.02 Proton exchange membrane fuel cell PEMFC	96														30	5	1	3			1								5
2.03 Solid oxide fuel cell SOFC	11														3	2		2	1	1									1
2.04 Direct borohydride fuel cell DBFC	9														1	2													2
3.01 Electrode design	233	8	7	13	3	1	5								8	7	13	3	1	5									13
3.02 Fuel supply and control	225	20	7	14	2	1									225	20	7	14	2	1									5
3.03 Fuel cartridge	138	2	1	3											138	2	1	3											
3.04 Oxygen supply	47			1											47		1												1
3.05 Pumps	23														23														
3.06 Fuel reformer	16														16														1
3.07 Carbon dioxide removal	13														13														
3.08 Water removal	2														2														
4.00 Manufacturing	42														42														

Source: Thomson Innovation & Thomson Data Analyzer



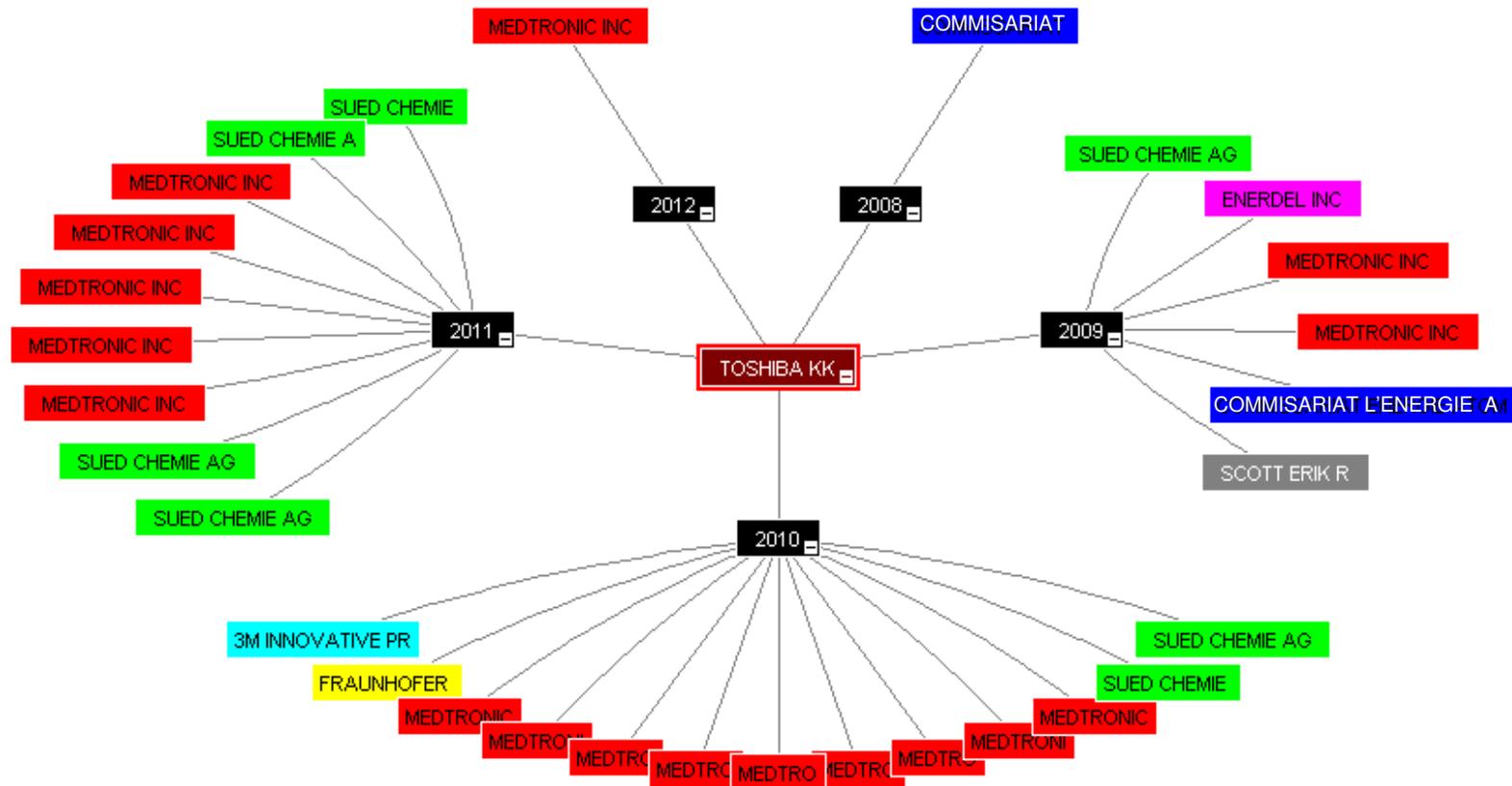
KEY TOOLS & TECHNIQUES: LICENSING/PARTNERSHIP ANALYSIS

OUTLICENSE OPPORTUNITIES?



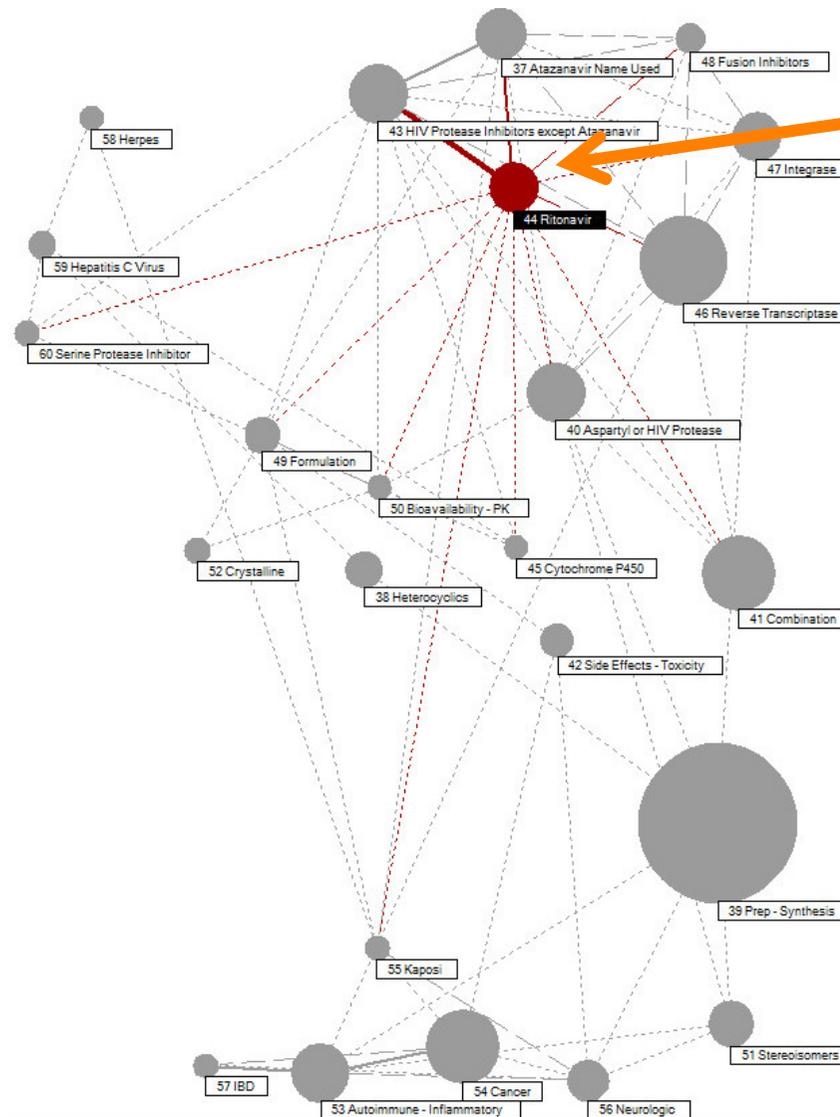
Source: Thomson Innovation

COLLABORATION PARTNERS?



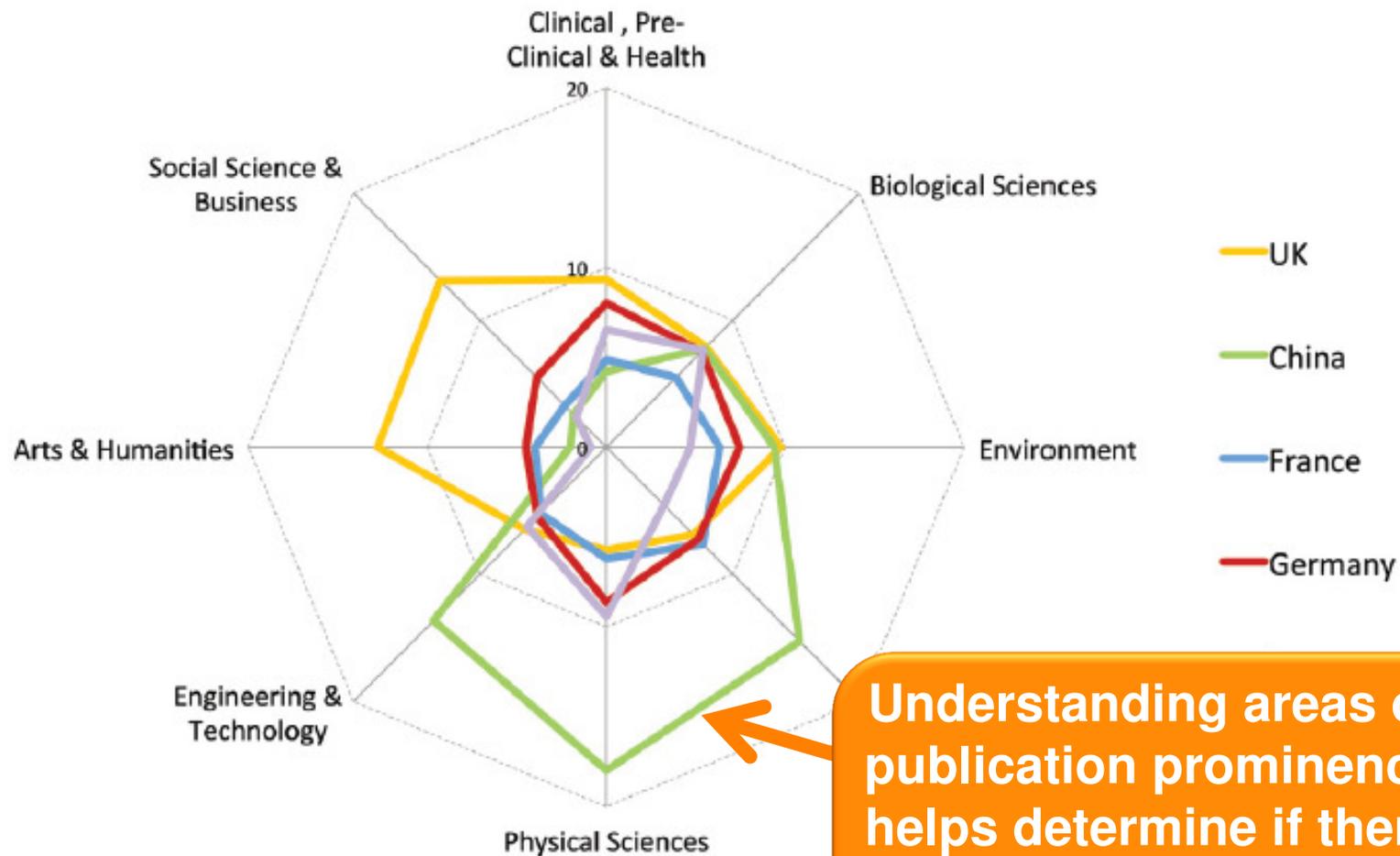
**Forward patent citations
reveal potential partners**

ADJACENT PARTNER IDENTIFICATION?



The lines represent connections between technologies and their uses, and may identify new partners or customers

WHERE IS CHINA STRONG IN R&D AS A MEASURE OF SCIENTIFIC OUTPUT?



Source: Thomson Reuters InCites

Understanding areas of publication prominence helps determine if there is a potential partnership opportunity



STAYING IN TUNE

ALERTING

Patent Search

Fielded Search | Publication Number | Expert Search

Save ▼ | **Create Alert** | Edit Collections | Display & Sort Options

1 Review Selected Collections

2 Enter Criteria:

All Text Fields

AND ▼ DWPI Manual (Optional)

OR ▼ Any IPC

Clear All Fields | Add

Make these my default

Preview/Edit Query:

ALLD=(MICRO) AND MC=(

Save Search & Create Alert

Properties | Run Options | Delivery & Content Options | Tracking

Name: Micro Fuel Cells

Description: (Optional) Monthly alert on micro fuel cell basic patents

Operators ▼

Browse X

Browse X

Additional Save and Share Options

Save to personal folder Browse

Share via public folder Browse

Share via the Saved Work Inbox Select Recipients

Share via email Select Recipients

Owner: bob.stembridge@thomsonreuters.com

Search

Previewer ▲

Undo Edits | Test Syntax

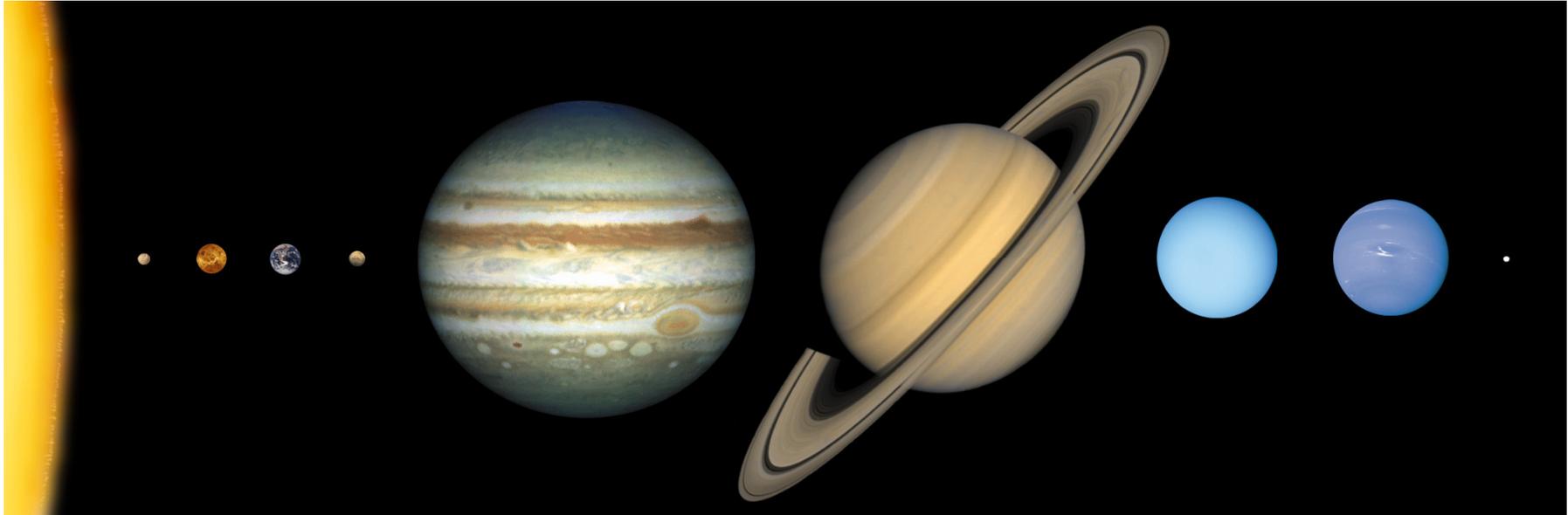


MAKING SWEET MUSIC

CONDUCTING THE ORCHESTRA

- Understand the big picture questions facing your business
- Use tools and resources to develop intelligence to support business decisions
- Add deeper insight and value to what you produce
- Make recommendations based on your knowledge of a situation





THANK YOU

bob.stembridge@thomsonreuters.com

COPYRIGHT THOMSON REUTERS 2012, DO NOT DISTRIBUTE



THOMSON REUTERS