How BizInt Smart Charts works

- Importing data sets from supported platforms
  - "Readers" for file formats
  - "Filters" for databases (source fields to columns)
- Ideally, the same record from the same database should render the same even when retrieved from different sources
- Combining charts from different sources
  - Mapping of columns between databases

How BizInt Smart Charts works

- Each row corresponds to a record / document in the data set

- Meta-data for each record:

  - Required: database, record ID

  - Desired: update date, source URL, copyright

- The only duplicates removed naturally in the software are the **same Record ID** from the **same Database**

Grouping Related Records

- BizInt Smart Charts handles groups of related records

- Records about the same clinical trial; drug profile; or patent family

- Linked data doesn't have to be publication or family data One record could be legal status (Orbit: FAMPAT + LGST)

- Patent data is linked by a concept of Common Patent Family

Common Patent Family

Database	Common Family	Patent Family		
		Patent	Kind	Date
Derwent World Patents Index	US 2014356956	US20140356959	A1	20141204
Derwent World Patents Index	US 2014356956	US20140356956	A1	20141204
			A2	20141211
		WO2014197568	A3	20150312
		CA2914638	A1	20141211
FAMPAT	US 2014356956	US 2014356956	A1	2014-12-04
		US 2014356959	A1	2014-12-04
			B2	2016-02-23
GQPAT Gold+ Proteins	US 2014356956	US20140356959		20141204
GQPAT Gold+ Proteins	US 2014356956	US20140356956		20141204
PatBase	US 2014356956	US 2014356959	A	2014-12-04
		US 2014356956	A	2014-12-04
		AU 2014274939	AA	2014-12-11
		WO 14197568	A2	2014-12-11
		WO 14197568	A3	2015-03-12
		CA 2914638	AA	2015-12-04
		KR 20160014036	A	2016-02-05

Common Patent Family

- Links records based on publication numbers in the data
- Can use family IDs on some platforms to link publications
- **Does not build a family from priorities**
- "Super Families" are the union of all family definitions

Rule-based selection of cell values (Reference Rows)

- Fill in the blank

- Database preference

- Selection based on values (size, numbers, dates, specials)

- Composite data

- *Working on a model for a disagreement rule*

Create reports integrating patent and IP sequence data.

CAS-9 - GenomeQuest, PatBase, DWPI (new STN), FAMPAT

	Title	Database	Patent Family			Family Status				Probable Assignee	Sequence Locations				
			Patent	Kind	Date	Pub No.	State	Status	Expiry		Seq. ID Number	% Identity	Length	Location	
1.	Modulating expression of a target nucleic acid comprises providing to the cell a guide RNA including a transcriptional activator or repressor domain as a fusion protein, and providing to the cell a nuclease null Cas9 protein	**1.1** DWPI **1.2** DWPI **1.3** GPATPRT | *link* **1.4** GPATPRT | *link* **1.5** Patbase | *link* **1.6** FAMPAT | *link*	US 2014356959 US 2014356956 AU 2014274939 WO 14197568 WO 14197568 CA 2914638 KR 20160014036	A A AA A2 A3 AA A	2014-12-04 2014-12-04 2014-12-11 2014-12-11 2015-03-12 2015-12-04 2016-02-05	US 20140356956 A1 US 9267135 B2	ALIVE ALIVE	PENDING GRANTED	2034-06-04 2034-06-04	PRESIDENT AND FELLOWS OF HARVARD COLLEGE	US20140356959-0001 US20140356956-0001	100.00 100.00	1368 1368	probable disclosure (not found by automated parsing) 1.3 probable disclosure (not found by automated parsing) 1.4	
	1.1 DWPI				1.5 Patbase				1.6 FAMPAT		1.5 Patbase				
2.	New bacteriophage comprises polynucleotide expressing RNA-directed DNA-binding polypeptide comprising nuclease module, and targeting module comprising guide RNA, for restricting growth of host cell, and for preparing antiseptic composition	**2.1** DWPI **2.2** DWPI **2.3** GPATPRT | *link* **2.4** GPATPRT | *link* **2.5** Patbase | *link* **2.6** FAMPAT | *link*	WO 15070193 US 2015132263 US 2015353901	A1 A A	2015-05-14 2015-05-14 2015-12-10	WO 201570193 A1 US 20150132263 A1 US 20150353901 A1	ALIVE ALIVE ALIVE	PENDING PENDING PENDING	2034-11-11 2034-11-11 2034-11-11	RADIANT GENOMICS INC	US20150132263-0002 US20150353901-0002	100.00 100.00	1368 1368	claim: 19; 20 2.3 claim: 19; 20 2.4	
	2.1 DWPI				2.5 Patbase				2.6 FAMPAT		2.5 Patbase				

Leverage basic IP data from different sources...

and unique content from selected sources…

...with a summary of key IP sequence data for each family.

Case 1: Orbit + Innovation

- Each family represented only once

- If a hit is unique to Orbit or Innovation, that record appears

- When more than one record is tied to a family, the resulting "record" is constructed based on rules

- Unique content "fills in the blanks", stitched together automatically into a single row

Hand Sanitizer - Innovation + Orbit

Title	Common Family	Database	Patent Family			Patent Assignee	Optimized Assignee	Inventor(s)	Priority Date	Status	INPADOC Family State
			Patent	Kind	Date						
1. Smart COVID Kit: Designing Automatic Hand Sanitizer Dispenser and Temperature Checker for use during Pandemics	AU 2020101947	1.1 FAM | link	AU 2020101947	A4	2020-10-01	SHANMUGAM MURUGAN DR		SHANMUGAM	2020-08-23	GRANTED	ALIVE
						1.1 FAM	1.1 FAM	1.1 FAM	1.1 FAM	1.1 FAM	1.1 FAM
2. System for dispensing hand sanitizer, has pair of infrared (IR) transmitter receiver that is provided with integrated circuit and associated circuitry senses presence of hand in front of IR transmitter receiver	AU 2020102646	2.1 Innov | link 2.2 FAM | link	AU 2020102646	A4	2020-11-26	BATTASE A P FAROOQUI M A GAIKWAD A A HAFIZ S I F A KHAN A M MOHIUDDIN M Z MUNDE S V	HAFIZ SHAIKH IFRAH FATEMA ABDUL KHAN ABDUL MALIK GAIKWAD ASHA ASHOK FAROOQUI MAZAHAR AHMED MUNDE SUREKHA VISHNUPANT BATTASE ANIL P. MOHIUDDIN MOMIN ZAKI	Hafiz, Shaikh Ifrah Fatema Abdul Mohiuddin, Momin Zaki Farooqui, Mazahar Ahmed Battase, Anil P. Khan, Abdul Malik Gaikwad, Asha Ashok Munde, Surekha Vishnupant	2020-10-08	GRANTED	ALIVE
	2.1 Innov		2.1 Innov			2.1 Innov	2.1 Innov	2.1 Innov	2.1 Innov	2.2 FAM	2.2 FAM
3. Alcohol-based hand sanitizer dispenser installed in e.g. hospitals, has alarm which is activated when person does not receive hand sanitizer with in preset time, and is deactivated once individual gets hand sanitizer	CA 2807337	3.1 Innov | link 3.2 FAM | link	CA 2807337	A1	2014-08-22	COLAROSSI A PATEL A	COLAROSSI ANTONIA PATEL ARCHNA	PATEL, ARCHNA COLAROSSI, ANTONIA	2013-02-22	LAPSED	DEAD
	3.1 Innov		3.1 Innov			3.1 Innov	3.1 Innov	3.1 Innov	3.1 Innov	3.2 FAM	3.2 FAM
4. Induction type hand sanitizer dispenser	CN 103251339	4.1 FAM | link	CN 103251339	A	2013-08-21	WUXI CHONG AN DISTRICT TECHNOLOGY INNOVATION SERVICE CENTER		HE HAIYAN	2013-05-23	LAPSED	DEAD
	4.1 FAM					4.1 FAM	4.1 FAM	4.1 FAM	4.1 FAM	4.1 FAM	4.1 FAM

Coverage: Only one row per family

Terminology: Prefer a provider

Linking unique content together

Case 1: Orbit + Innovation

- Common Family can link multiple families from a single source (e.g. Innovation) to one family from another (Orbit)

	Title	Common Family	Database	Patent Family			Priority Date
				Patent	Kind	Date	
34	Interactive children's hand sanitizer	US 20110132931	FAMPAT	US 20110132931	A1	2011-06-09	2009-12-07
				US 20120267392	A1	2012-10-25	
35	Interactive waterless hand sanitizer dispenser for young children, used in e.g. shopping mall, has clear spherical housing that is provided with interactive environment with tubing for entertaining and dispensing hand sanitizer	US 20110132931	Derwent Innovation + DWPI	US 20120267392	A1	2012-10-25	2009-12-07
36	Waterless hand sanitizer dispenser has reservoir able to contain supply of waterless hand sanitizer and air compressor able to mix air with sanitizer and create foam	US 20110132931	Derwent Innovation + DWPI	US 20110132931	A1	2011-06-09	2009-12-07

Case 1: Orbit + Innovation

- Content-based rules can help when there are discrepancies

Case 2: Publication level data

- When working with publication level data, the one-row-per-family model is particularly useful

- Multiple hits in a family are likely when

  - transferring publication numbers

  - searching attributes of publications (e.g. IP sequences)

Case 2: Orbit BioSequences

- Summarize rules simplify the view of a family

Patent Family			Query ID	SEQ ID NO	Sequence Claimed In
Patent	Kind	Date			
US 20190000944	A1	2019-01-03	CDR1	316	45,41
US 20190000944	A1	2019-01-03	CDR2	316	45,41
US 20190000944	A1	2019-01-03	CDR3	316	45,41
US 20190000944	A1	2019-01-03	CDR2	288	40
US 20190000944	A1	2019-01-03	CDR3	289	40
US 20190000944	A1	2019-01-03	CDR1	364	41
US 20190000944	A1	2019-01-03	CDR2	364	41
US 20190000944	A1	2019-01-03	CDR3	364	41
US 20190000944	A1	2019-01-03	CDR1	287	40

Query ID	Sequence Claimed In
CDR1	40
CDR2	41
CDR3	42
	45
	46

Case 3: Updating

- When revisiting a search, or incorporating an alert, it is helpful to know whether you have seen the family before and which publications are new

- The publication returned by Innovation may change after a grant is issued

- Detailed workshop slides at bizint.com/slides

Detecting Changes in Reports

BizInt Smart Charts

for Patents

- BizInt Smart Charts allows you to easily update reports with new data, flagging new, changed, and unchanged records.

PatBase: Mousetraps - Updated

	Title	Row Status	Patent Family			International Patent Class	Patent Assignee	New Publications
			Patent	Kind	Date			
1	Falle zum Fangen von Maeusen und aehnlichen Kleintieren; Trap to catch mice and other small rodents has two housing parts one open at the top and pivotably positioned on an other open a	Added	DE 102004053106	B3	2006-03-30	A01M23/18 A01M23/22 A01M23/00	HAFFNER HEINO	DE 102004053106 B3
2	PIEGE A SOURIS; Mousetrap has drum with two open ends two heightened inner walls at open ends and adhesive layer applied on inner wall of drum	Added	GB 200322688 GB 2406257 DE 20315618 FR 2860955	A0 A1 U1 A3	2003-10-29 2005-03-30 2003-12-04 2005-04-22	A01M23/00 A01M23/00	HSU TSU NENG LAI CHUN CHIEH	GB 200322688 A0 GB 2406257 A1 DE 20315618 FR 2860955 A3
3	Mausefalle; Mousetrap for use in garden has catch container designed as bottle and including pivot that is twistably supported on support p	Updated	DE 102004052292	A1	2006-05-04	A01M23/02 A01M23/04 A01M23/00	WENK KARL HEINZ	
4	TESTING A PIPELINE IN AN IC	Updated	WO 2006006132 EP 1766428	A1 A1	2006-01-19 2007-03-28	G01R31/3185 G01R31/28	KONINKL PHILIPS ELECTRONICS NV VAN KAAM KEES WIELAGE PAUL	EP 1766428 A1
5	Straight-through type mouse-trap	Unchanged	CN 2724423	Y	2005-09-14	A01M23/08 A01M23/00	TANG QIAOFEI	

Detecting New Publications

- A new column reports the new publications in each row of the table.

PatBase: Mousetraps - Updated

	Title	Row Status	Patent Family			International Patent Class	Patent Assignee
			Patent	Kind	Date		
1	Falle zum Fangen von Maeusen und aehnlichen Kleintieren; Trap to catch mice and other small rodents has two housing parts one open at the top and pivotably positioned on an other open a	Added	DE 102004053106	B3	2006-03-30	A01M23/18 A01M23/22 A01M23/00	HAFFNER HEINO
2	PIEGE A SOURIS; Mousetrap has drum with two open ends two heightened inner walls at open ends and adhesive layer applied on inner wall of drum	Added	GB 200322688 GB 2406257 DE 20315618 FR 2860955	A0 A1 U1 A3	2003-10-29 2005-03-30 2003-12-04 2005-04-22	A01M23/00 A01M23/00	HSU TSU NENG LAI CHUN CHIEH
3	Mausefalle; Mousetrap for use in garden has catch container designed as bottle and including pivot that is twistably supported on support p	Updated	DE 102004052292	A1	2006-05-04	A01M23/02 A01M23/04 A01M23/00	WENK KARL HEINZ
4	TESTING A PIPELINE IN AN IC	Updated	WO 2006006132 EP 1766428	A1 A1	2006-01-19 2007-03-28	G01R31/3185 G01R31/28	KONINKL PHILIPS ELECTRONICS NV VAN KAAM KEES WIELAGE PAUL
5	Straight-through type mouse-trap	Unchanged	CN 2724423	Y	2005-09-14	A01M23/08 A01M23/00	TANG QIAOFEI

New Publications

DE 102004053106 B3

GB 200322688 A0
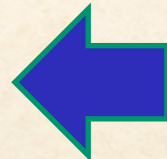GB 2406257 A1
DE 20315618
FR 2860955 A3

EP 1766428 A1

Detecting Changes in Reports

- With the ability to report New Publications across databases (seen here at the record level).

	Title	Database	Row Status	Patent Family			New Publications
				Patent	Kind	Date	
5.1	Fermented fruit solutions for cleaning compositions ✔	FAMPAT	Unchanged ✔	WO 201540442 WO 201540506 WO 201540444	A1 A1 A1	2015-03-26 2015-03-26 2015-03-26	
5.2	SOFTENING COMPOSITIONS INCLUDING FERMENTED FRUIT SOLUTIONS AND METHODS FOR MAKING AND USING THE SAME	PatBase	Added	WO 15040506 WO 15040445 WO 15040444 WO 15040442	A1 A1 A1 A1	2015-03-26 2015-03-26 2015-03-26 2015-03-26	WO 2015040506 A1 ⌗ WO 2015040445 A1 WO 2015040444 A1 WO 2015040442 A1
6.1	Processed edible product comprising a polyelectrolyte complex and an antimicrobial compound ✔	FAMPAT	Unchanged ✔	WO 201534360	A1	2015-03-12	
6.2	PROCESSED EDIBLE PRODUCT COMPRISING A POLYELECTROLYTE COMPLEX AND AN ANTIMICROBIAL COMPOUND	PatBase	Added	WO 15034360	A1	2015-03-12	WO 2015034360 A1 ⌗

Detecting Changes in Reports

- Here summarized at the family level, showing only the truly new publications in the context of the report.

	Title	Database	Row Status	Patent Family			New Publications
				Patent	Kind	Dat	
5.	Fermented fruit solutions for cleaning compositions	5.1 FAMPAT |	Updated	O 15040506	A1	2015-03	WO 2015040445 A1
		5.2 Patbase |		O 15040445	A1	2015-03	
				O 15040444	A1	2015-03	
				O 15040442	A1	2015-03	
	5.1 FAMPAT					5.2 P:	
6.	Processed edible product comprising a polyelectrolyte complex and an antimicrobial compound	6.1 FAMPAT |	Updated	O 201534360	A1	2015-03	
		6.2 Patbase |					
	6.1 FAMPAT					6.1 F/	6.1 FAMPAT

Starting in VantagePoint?

- In today's software, the workflow always starts in BizInt

- Derived fields (clean-up, further processing, term extraction) can be returned to BizInt, associated with the correct rows

- Is it possible to start with data in VantagePoint, and annotate the data in BizInt Smart Charts?

Starting in VantagePoint?

- A filter and mapping file are required in BizInt Smart Charts (which requires a consistent core set of fields in the export)

- Integrated export from Reference Rows would retain the record ID from the VP export

- Record augmentation within VP?

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THE JOURNEY CONTINUES