



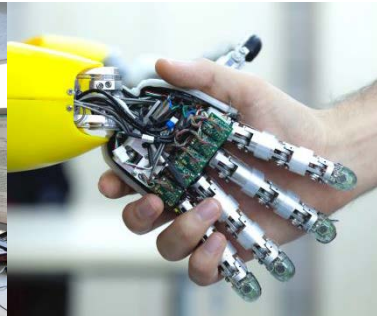
Europäisches
Patentamt

European
Patent Office

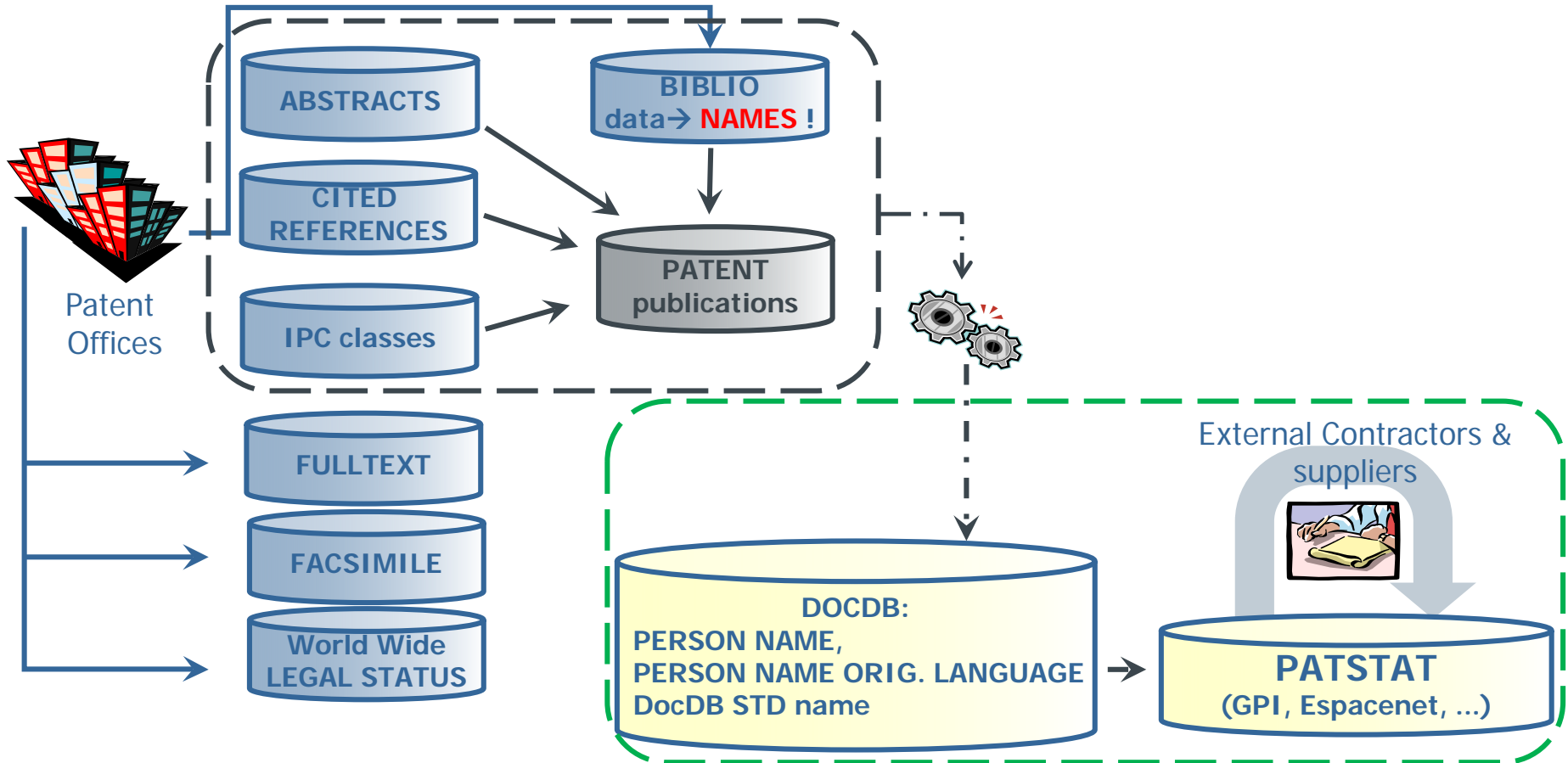
Office européen
des brevets

Current practice by the EPO

Name Standardization: is there a one size fit all ?



Where does our data come from ?



Standardization - Normalisation – Harmonisation

Standardization

Normalisation

Harmonisation

uniform approach

organizing the data in a data base

Grouping “names”; persons

across IP authorities

decomposing tables

Assign common (and stable) identifiers

applicants, inventors, professional representatives, opponents,... ?

eliminate data redundancy

Representative for the group ?

ST36: ...Processing of patent information using XML

PATSTAT “PERSON table”

5 flavours of names.... from which 3 are “standardized”

ST20: ...NAME INDEXES TO PATENT DOCUMENTS... (1993)

[PATSTAT Data Catalog](#)

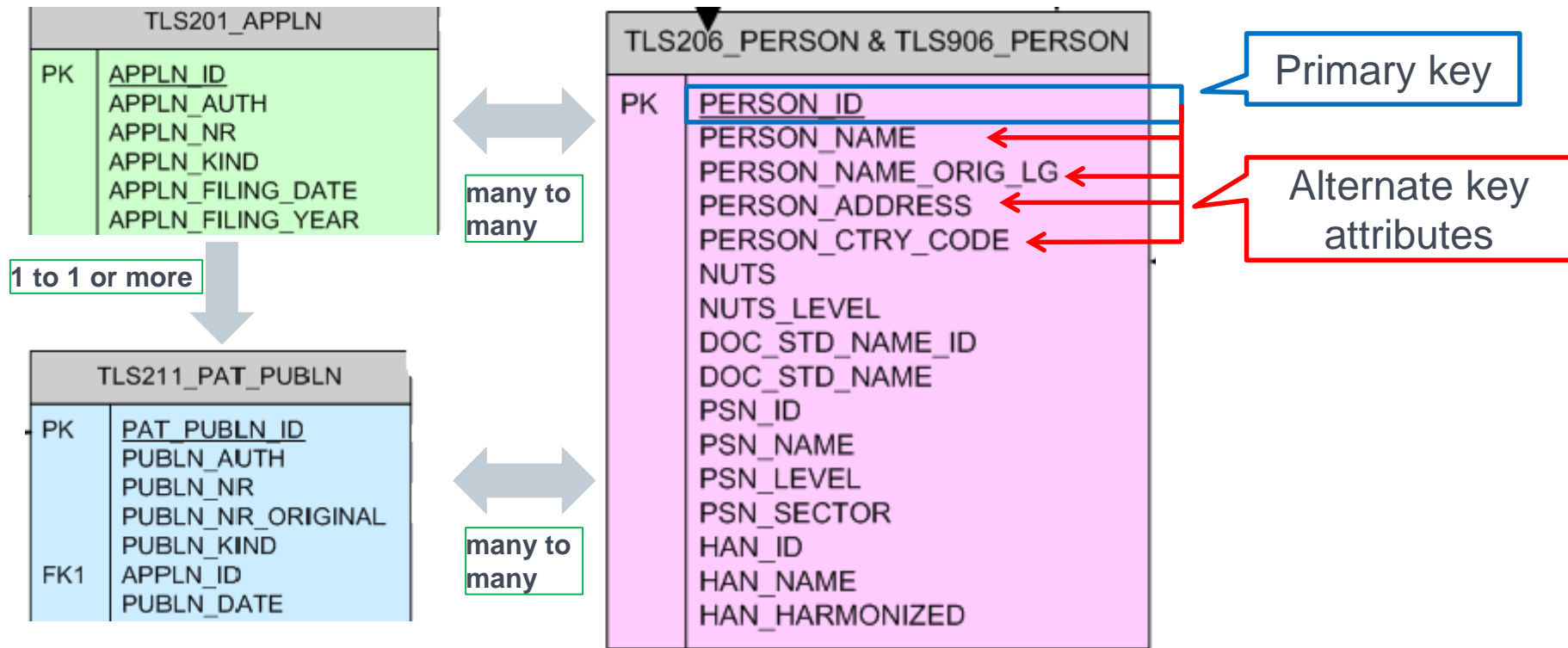
Methodologies → White papers

Is it possible ?

It is possible, pure data exercise

Quality : much better
PERFECT → does not exist

Normalised data model in PATSTAT



And this is how it looks for real (normalised data)

appln_id	application	filing_date	person_id	applt	invt	person_name	person_address	person_ctry_code	person_name_orig_lg	doc_std_name	psn_name
414098177	WO2013006021	08/07/2013	68495240	1	0	SEOUL SEMICONDUCTOR CO., LTD.		KR	서울반도체 주식회사	SEOUL SEMICONDUCTOR CO LTD	SEOUL SEMICONDUCTOR CO., LTD.
414098177	WO2013006021	08/07/2013	68739281	0	1	LEE, CHUNG HOON		KR	이정훈	LEE CHUNG HOON	LEE, CHUNG HOON
414098177	WO2013006021	08/07/2013	66289217	0	2	LEE, KEON YOUNG		KR	이건영	LEE KEON YOUNG	LEE, KEON YOUNG
417076729	WO2013077972	26/06/2013	69627117	2	0	SHENZHEN KANGJUZHENG PHARMACEUTICAL TECHNOLOGY CO., LTD		CN	深圳市康居正医药科技有限公司	SHENZHEN KANGJUZHENG PHARMACEUTICAL TECH CO LTD	SHENZHEN KANGJUZHENG PHARMACEUTICAL TECHNOLOGY CO., LTD
417076729	WO2013077972	26/06/2013	67868430	1	0	SHENZHEN UNIVERSITY		CN	深圳大学	UNIV SHENZHEN	SHENZHEN UNIVERSITY
417076729	WO2013077972	26/06/2013	67892810	0	1	JIN, Guangyi		CN	靳广毅	JIN GUANGYI	JIN, Guangyi
417076729	WO2013077972	26/06/2013	66896660	0	2	WANG, Zhulin		CN	王竹林	WANG ZHULIN	WANG, Zhulin
418464256	WO2013080895	15/11/2013	68484109	1	0	KYOCERA CORPORATION		JP	京セラ株式会社	KYOCERA CORP	KYOCERA CORPORATION
418464256	WO2013080895	15/11/2013	67279871	0	1	MOTO, YOUICHI		JP	元 洋一	MOTO YOUICHI	MOTO, YOUICHI
418464256	WO2013080895	15/11/2013	65953032	0	2	MURATA, TAKAHIRO		JP	村田 隆博	MURATA TAKAHIRO	MURATA, TAKAHIRO
418464256	WO2013080895	15/11/2013	67944500	0	3	NAKAGAWA, HIDENOBU		JP	中川 秀信	NAKAGAWA HIDENOBU	NAKAGAWA, HIDENOBU
418464256	WO2013080895	15/11/2013	68607997	0	4	SHIMOZONO, TAKAHIRO		JP	下園 貴広	SHIMOZONO TAKAHIRO	SHIMOZONO, TAKAHIRO
418464256	WO2013080895	15/11/2013	66741907	0	5	KOBAYASHI, IWAO		JP	小林 巖	KOBAYASHI IWAO	KOBAYASHI, IWAO
425104184	WO2013000017	02/07/2013	68400395	1	1	SOLIMAN, BAHİ MOHAMED İBRAHİM		EG	سليمان باهي محمد ابراهيم	SOLIMAN BAHİ MOHAMED İBRAHİM	SOLIMAN, BAHİ MOHAMED İBRAHİM
441067073	WO2013011110	03/12/2013	66065963	1	0	AGERIGNA CO., LTD		KR	주식회사 아게르나	AGERIGNA CO LTD	AGERIGNA CO., LTD
441067073	WO2013011110	03/12/2013	65721454	0	1	TEREFE MATI BEKUMA		ET	테레피 마티베쿠마	TEREFE MATI BEKUMA	TEREFE MATI BEKUMA

And this is how it looks for real (harmonised data) EP Patents filed by ABB in 2014

appln_id	application	person_id	person_name	person_address	person_ctry_code	doc_std_name	psn_name	han_name
418416603	EP13854676	62099	ABB AB	Kopparbergsvägen 2,721 78 Västerås	SE	ABB AB	ABB (ASEA BROWN BOVERI)	ABB AB
380694844	EP13700860	21937	ABB AG	Kallstadter Strasse 1,68309 Mannheim	DE	ABB AG	ABB (ASEA BROWN BOVERI)	ABB AG
380384844	EP13000212	821573	ABB AG	Kallstadter Str. 1,68309 Mannheim	DE	ABB AG	ABB (ASEA BROWN BOVERI)	ABB AG
380645049	EP13153118	16276	ABB B.V.	Frankeneng 15,6716 AA Ede	NL	ABB BV	ABB (ASEA BROWN BOVERI)	ABB BV
408816146	EP13734759	54453093	ABB Gomtec GmbH	Am Technologiepark 12,82229 Seefeld	DE	ABB GOMTEC GMBH ABB HV CABLES (SWITZERLAND) GMBH	ABB GOMTEC	ABB GOMTEC GMBH
407540595	EP13729756	54450796	ABB HV Cables (Switzerland) GmbH	Brown Boveri Strasse 6,5400 Baden, Aargau 8585 Trans-Canada Highway,St.-Laurent, Québec H4S 1Z6	CH	ABB HV CABLES (SWITZERLAND) GMBH	ABB HV CABLES (SWITZERLAND)	ABB HV CABLES SWITZERLAND GMBH
417149007	EP13846869	1520710	ABB Inc.		CA	ABB INC	ABB (ASEA BROWN BOVERI)	ABB INC
409268736	EP13740638	4106586	ABB K.K.	26-1, Sakuragaokacho Shibuya-ku,Tokyo 150-8512	JP	ABB KK	ABB (ASEA BROWN BOVERI)	ABB KK
411983014	EP13780686	52418076	ABB K.K.	1-1, Osaki 2-chome,Shinagawa-ku,Tokyo 141-6022	JP	ABB KK	ABB (ASEA BROWN BOVERI)	ABB KK
380717410	EP13153787	10174	ABB Oy	Strömbergintie 1,00380 Helsinki	FI	ABB OY	ABB (ASEA BROWN BOVERI)	ABB LTD
412377088	EP13786457	396823	ABB Research Ltd.	Affoltern Str. 44,8050 Zürich	CH	ABB RESEARCH LTD	ABB RESEARCH	ABB RESEARCH LTD
380196302	EP13151400	10478	ABB Research Ltd.	Affolternstrasse 44,8050 Zürich	CH	ABB RESEARCH LTD		ABB RESEARCH LTD
406475395	EP13168374	50304	ABB S.p.A.	Via Vittor Pisani 16,20124 Milano	IT	ABB SPA		ABB SPA
379456867	EP13150114	1299	ABB Schweiz AG	Brown Boveri Strasse 6,5400 Baden	CH	ABB SCHWEIZ AG		ABB SCHWEIZ AG
381676103	EP13460005	111826	ABB Sp.zo.o.	Ul. Zeganska 1,04-713 Warszawa	PL	ABB SP ZO O	ABB (ASEA BROWN BOVERI)	ABB SP ZOO
380041490	EP13151232	10758	ABB Technology AG	Affolternstrasse 44,8050 Zürich	CH	ABB TECHNOLOGY AG	ABB TECHNOLOGY (ASEA BROWN BOVERI TECHNOLOGY)	ABB TECH AG
379754776	EP13150440	10527	ABB Technology Ltd	Affolternstrasse 44,8050 Zürich	CH	ABB TECHNOLOGY LTD	ABB TECHNOLOGY (ASEA BROWN BOVERI TECHNOLOGY)	ABB TECH AG
380799382	EP13701599	4141832	ABB Technology Ltd.	Affolternstrasse 44,8050 Zürich	CH	ABB TECHNOLOGY LTD	ABB TECHNOLOGY (ASEA BROWN BOVERI TECHNOLOGY)	ABB TECH AG
405020602	EP13160606	19979	ABB Turbo Systems AG	Bruggerstrasse 71a,5400 Baden	CH	ABB TURBO SYSTEMS AG	ABB TURBO SYSTEMS	ABB TURBO SYSTEMS AG

ABB in Japan
Lets have a look

And this is how it looks for real (harmonised data) EP Patents filed by ABB in 2014

appln_id	application	person_id	person_name	person_address	person_etry_code	doc_std_name	psn_name	han_name
35437246	JP27210397	31967973	ABB IND KK		JP	ABB IND KK	ABB IND	ABB KK
30067246	WO9600053	16507018	ABB INDUSTRY K.K.		JP	ABB INDUSTRY K K	ABB INDUSTRY	ABB KK
17188036	EP96900698	3611538	ABB Industry K.K.	2-39, Akasaka 5-chome Minato-ku,Tokyo 107	JP	ABB INDUSTRY K K	ABB INDUSTRY	ABB KK
46297019	US4312098	5666605	ABB Industry K.K.	Tokyo	JP	ABB INDUSTRY K K	ABB INDUSTRY	ABB KK
241972	EP05250833	385467	ABB K.K.	26-1, Sakuragaoka-cho, Shibuya-ku,Tokyo 150-8512	JP	ABB KK	ABB (ASEA BROWN BOVERI)	ABB KK
136455	EP07706935	96629	ABB K.K.	26-1, Sakuragaokacho, Shibuya-ku,Tokyo 150-8512	JP	ABB KK	ABB (ASEA BROWN BOVERI)	ABB KK
17162923	EP96112636	3566170	ABB K.K.	2-39 Akasaka 5-chome, Minato-ku,Tokyo 107	JP	ABB KK	ABB (ASEA BROWN BOVERI)	ABB KK
56215205	EP07807304	4106586	ABB K.K.	26-1, Sakuragaokacho Shibuya-ku,Tokyo 150-8512	JP	ABB KK	ABB (ASEA BROWN BOVERI)	ABB KK
495564887	CN201780003521	58134678	ABB KK			ABB KK	ABB KK	ABB KK

PATSTAT person_id is stable and fixed accross releases(+/-) 2016b →2019a

→ linkage to other data sources, sharing of grouping

2019A	person_name	person_address	person_ctry_code	2016b	person_name	person_address	person_ctry_code
1299	ABB Schweiz AG	Brown Boveri Strasse 6,5400 Baden	CH	10174	ABB Oy	Strömbergintie 1,00380 Helsinki	FI
10174	ABB Oy	Strömbergintie 1,00380 Helsinki	FI	10478	ABB Research Ltd.	Affolternstrasse 44,8050 Zürich	CH
10478	ABB Research Ltd.	Affolternstrasse 44,8050 Zürich	CH	10527	ABB Technology Ltd	Affolternstrasse 44,8050 Zürich	CH
10527	ABB Technology Ltd	Affolternstrasse 44,8050 Zürich	CH	10758	ABB Technology AG	Affolternstrasse 44,8050 Zürich	CH
10758	ABB Technology AG	Affolternstrasse 44,8050 Zürich	CH	10758	ABB Technology AG	Affolternstrasse 44,8050 Zürich	CH
16276	ABB B.V.	Frankeneng 15,6716 AA Ede	NL	16276	ABB B.V.	Frankeneng 15,6716 AA Ede	NL
19979	ABB Turbo Systems AG	Bruggerstrasse 71a,5400 Baden	CH	19979	ABB Turbo Systems AG	Bruggerstrasse 71a,5400 Baden	CH
21937	ABB AG	Kallstadter Strasse 1,68309 Mannheim	DE	21937	ABB AG	Kallstadter Strasse 1,68309 Mannheim	DE
50304	ABB S.p.A.	Via Vittor Pisani 16,20124 Milano	IT	50304	ABB S.p.A.	Via Vittor Pisani 16,20124 Milano	IT
62099	ABB AB	Kopparbergsvägen 2,721 78 Västerås	SE	111826	ABB Sp.zo.o.	Ul. Zeganska 1,04-713 Warszawa	PL
111826	ABB Sp.zo.o.	Ul. Zeganska 1,04-713 Warszawa	PL	821573	ABB AG	Kallstadter Str. 1,68309 Mannheim	DE
396823	ABB Research Ltd.	Affoltern Str. 44,8050 Zürich	CH	1520710	ABB Inc.	8585 Trans-Canada Highway,St.-Laurent, Québec H4S 1Z6	CA
821573	ABB AG	Kallstadter Str. 1,68309 Mannheim	DE	4106586	ABB K.K.	26-1, Sakuragaokacho Shibuya-ku,Tokyo 150-8512	JP
1520710	ABB Inc.	8585 Trans-Canada Highway,St.-Laurent, Québec H4S 1Z6	CA	4106586	ABB K.K.	26-1, Sakuragaokacho Shibuya-ku,Tokyo 150-8512	JP
4106586	ABB K.K.	26-1, Sakuragaokacho Shibuya-ku,Tokyo 150-8512	JP	4141832	ABB Technology Ltd.	Affolternstrasse 44,8050 Zürich	CH
4141832	ABB Technology Ltd.	Affolternstrasse 44,8050 Zürich	CH				
52418076	ABB K.K.	1-1, Osaki 2-chome,Shinagawa-ku,Tokyo 141-6022	JP				
54450796	ABB HV Cables (Switzerland) GmbH	Brown Boveri Strasse 6,5400 Baden, Aargau	CH				
54453093	ABB Gomtec GmbH	Am Technologiepark 12,82229 Seefeld	DE				

Name harmonisation: Corporate structure

Volkswagen

VOLKSWAGE AG
VOLKSWAGEN DO BRASIL S/A
VOLKSWAGEN AG
VOLKSWAGEN AKTIENGESELLSCHAFT
AUDI AG
SEAT SA
SKODA AUTO
[...]

Wilhelm Karmann GmbH

KARMANN WILHELM GMBH
WILHELM KARMANN GMBH
WILHEM KARMANN GMBH
WILHELM KARMANN GMBH I
WILHEIM KARMANN GMBH
WILHELM KARMANN GMBH I L

Man SE

MAN FINANCIAL INC
MAN NUTZFAHRZEUGE OSTERREICH AG
MAN DIESEL & TURBO SE
MAN TURBOMASCHINEN AG
MAN NUTZFAHRZEUGE AKTIENGESELLSCHAFT
MAN GUTEHOFFNUNGSHUTTE AG
MAN GUTEHOFFNUNGSHUTE AKTIENGESELLSCHAFT
[...]

Porsche AG

PORSCHE LIZENS-UND HANDELSGESELLSCHAFT MBH & CO KG
DR ING H C F PORSCHE AG
F PORSCHE AKTIENGESELLSCHAFT
DR ING H C F PORSCHE AG
[...]

Scania AB

SCANIA CV AKTIEBOLAC
SCANIA CV AB (PUB)
AKTIEBOLAGET SCANIA-VABIS SODERTALJE
DYNAMATE AB

Name harmonisation: Dynamic corporate structure

Volkswagen

Wilhelm Karmann GmbH

Man SE

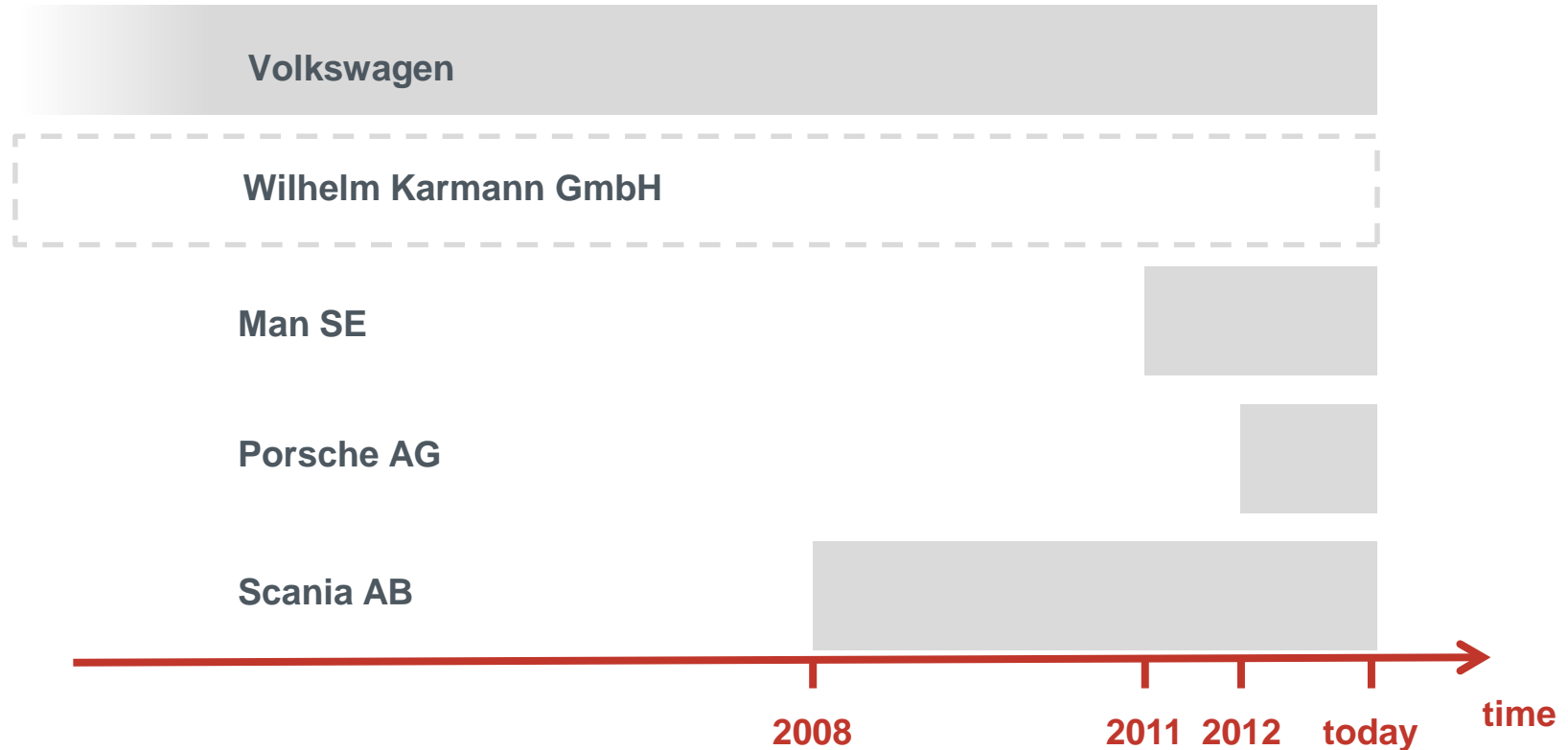
Porsche AG

Scania AB [...]

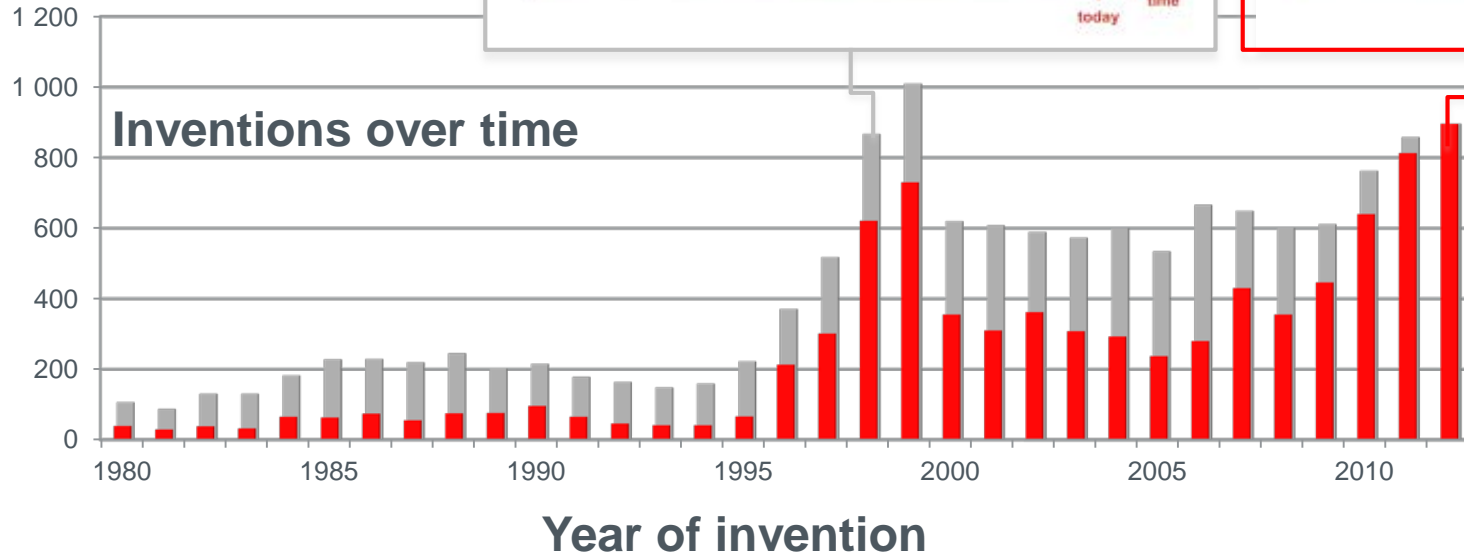
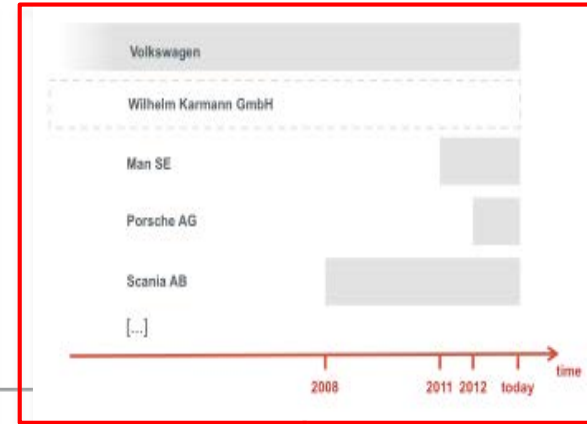


today time

Name harmonisation: Dynamic corporate structure



Volkswagen Static vs. Dynamic corporate structure



Ways forward: geo-tagging, an inroad to name matching ? (Research project)

Regional analysis – placing applicants on the map


Sheet 1



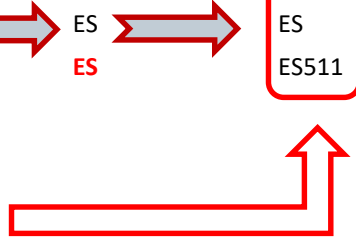
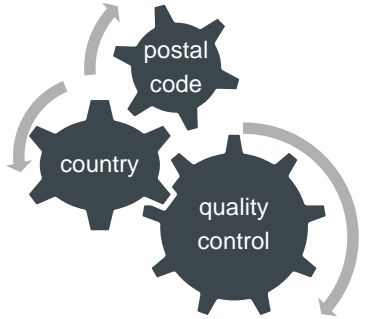
Why geo-tagging ?

- Currently in PATSTAT: NUTS codes (table tls906_person)

person_id	person_name	person_address	person_etry_code	nuts	nuts_level
659253	ASAC Compania de Biotecnologia E Investigacion, S.A.	Sagitario, 14,03006 Alicante	ES	ES521	3
78894	Universidad Miguel Hernandez de Elche	Edificio Hélike, Avda. de la Universidad,03202 Elche (Alicante)	ES	ES521	3
3274268	MICROLITE, S.L.	Partida Del Bosch S/N,E-03330 Crevillente (Alicante)	ES	ES521	3
873317	Especialidades Farmaceuticas Centrum, S.A.	Sagitario no. 14, 03006 Alicante	ES	ES521	3
56064	Consejo Superior de Investigaciones Cientificas	Serrano, 117, 28006 Madrid	ES	ES300	3
53352016	Airbus Operations, S.L.	Avenida John Lennon s/nº,28906 Getafe (Madrid)	ES	ES300	3
222243	REPSOL QUIMICA S.A.	Paseo de la Castellana 278-280,E-28046 Madrid	ES	ES300	3
5554429	Laboratorios Del Dr. Esteve, S.A.	Barcelona	ES	ES	0
122924	LABORATORIOS DEL DR. ESTEVE, S.A.	Av. Mare de Déu de Montserrat, 221, 08041 Barcelona	ES	ES511	3

 <http://ec.europa.eu/eurostat/tercet/flatfiles.do>

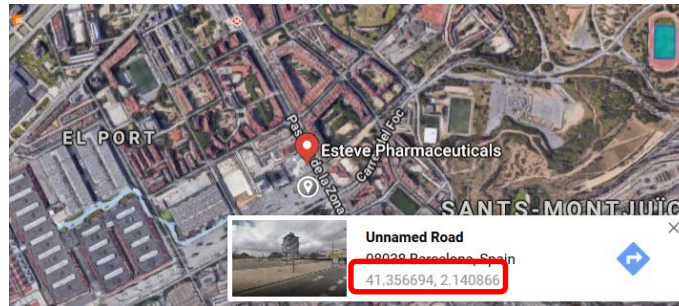
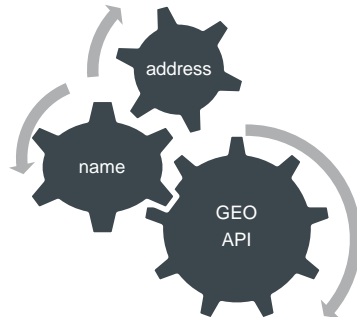
[pc2016_es_NUTS-2013_v2.3.zip](#) Postal codes for ES, 2013



Why geo-tagging ? → without address, we still locate ! Sometimes...

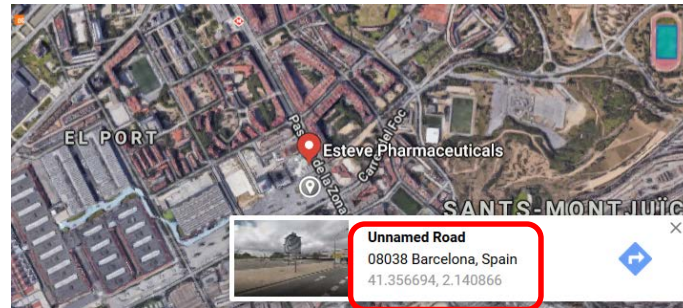
- Future (?) in PATSTAT: NUTS codes (table t1s906_person)

person_id	person_name	person_address	person_ctype	nuts	nuts_level
659253	ASAC Compania de Biotecnologia E Investigacion, S.A.	Sagitario, 14,03006 Alicante	ES	ES521	3
78894	Universidad Miguel Hernandez de Elche	Edificio Hélike, Avda. de la Universidad,03202 Elche (Alicante)	ES	ES521	3
3274268	MICROLITE, S.L.	Partida Del Bosch S/N,E-03330 Crevillente (Alicante)	ES	ES521	3
873317	Especialidades Farmaceuticas Centrum, S.A.	Sagitario no. 14, 03006 Alicante	ES	ES521	3
56064	Consejo Superior de Investigaciones Cientificas	Serrano, 117, 28006 Madrid	ES	ES300	3
53352016	Airbus Operations, S.L.	Avenida John Lennon s/nº,28906 Getafe (Madrid)	ES	ES300	3
222243	REPSOL QUIMICA S.A.	Paseo de la Castellana 278-280,E-28046 Madrid	ES	ES300	3
5554429	Laboratorios Del Dr. Esteve, S.A.	Barcelona	ES	ES	0
122924	LABORATORIOS DEL DR. ESTEVE, S.A.	Av. Mare de Déu de Montserrat, 221, 08041 Barcelona	ES	ES511	3



PROBLEM

- Can we trust “black box” geo tagging software to “group names” ?
- Open source GEO tagging API
- GDPR ?



No, there is not one size fit all. Thank you!

gboedt@epo.org

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