



Surveying and Mapping Agency NRW

Geodata Center NRW

- tasks and products -

by Mark Büdenbender
on the 8th of March 2004



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1. motivation

manifesto to the impact of geo(basis)data:

„For more than 80% of all actions and decisions in administration, economy and also in private parts you need geographical data.“

Dr. Fritz Behrens, Minister of Interior of the State NRW

February 2000



2. basic situation

- ⇒ basic statistic data of NRW
- ⇒ inquiries/uses of cadastral geobasisdata
- ⇒ customers
- ⇒ demands of the geodata market
- ⇒ the surveying/mapping and cadastral administration as a data provider
- ⇒ problems and agenda

Geodata Center NRW - tasks and products -



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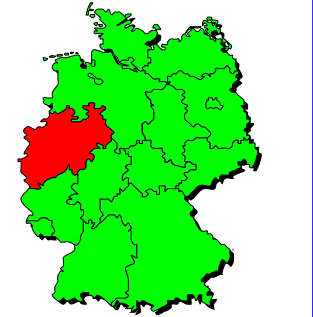
basic statistic data of Northrhine-Westfalia

18 Mio population
34.000 sqkm area
530 people/sqkm

9 Mio parcels
7 Mio buildings (ca.)
10 % changes/year

5 Regional units
54 counties and cities
as cadastral offices
440 ÖbVI

LHH 2001: 48 Milliarden €
BIP_(nom) 1995: 350 Milliard. €





customers

⇒ *administration*

e.g. Straßenbauverwaltung (road management),
MUNLV (environment and agriculture)

⇒ *economies*

e.g. communication service providers, electric
utilities, organisations for watermanagement,
DB (german railway)

⇒ *research*

e.g. geomarketing, statistics, GIS

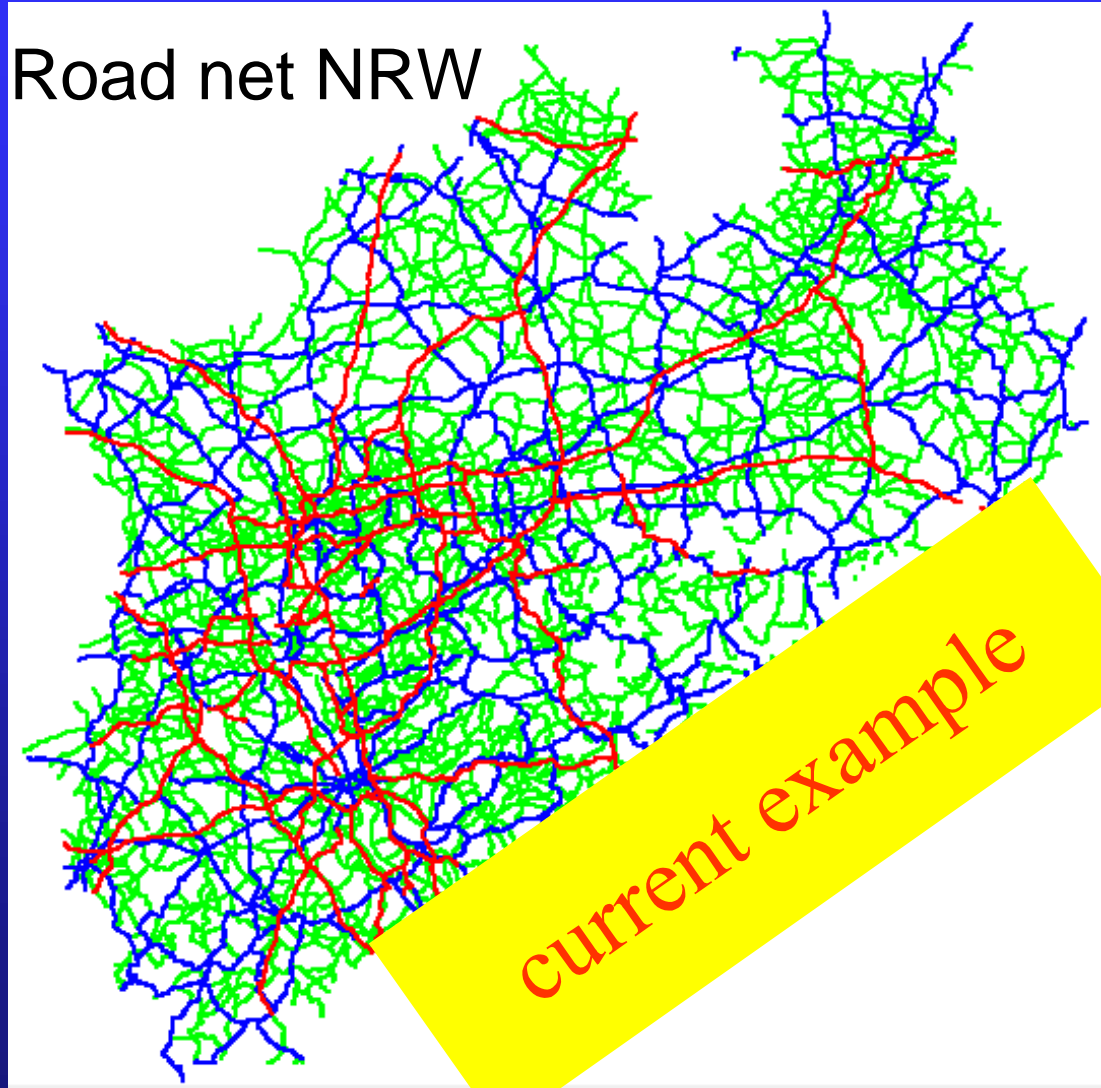
Landesstraßenbauverwaltung (road management)

- **Autobahnen**
- **Bundesstraßen**
- **Landesstraßen**

(+ *Kreisstraßen*)

cadastral
geobasisdata
for a road-GIS

Road net NRW



current example

Geodata Center NRW - tasks and products -

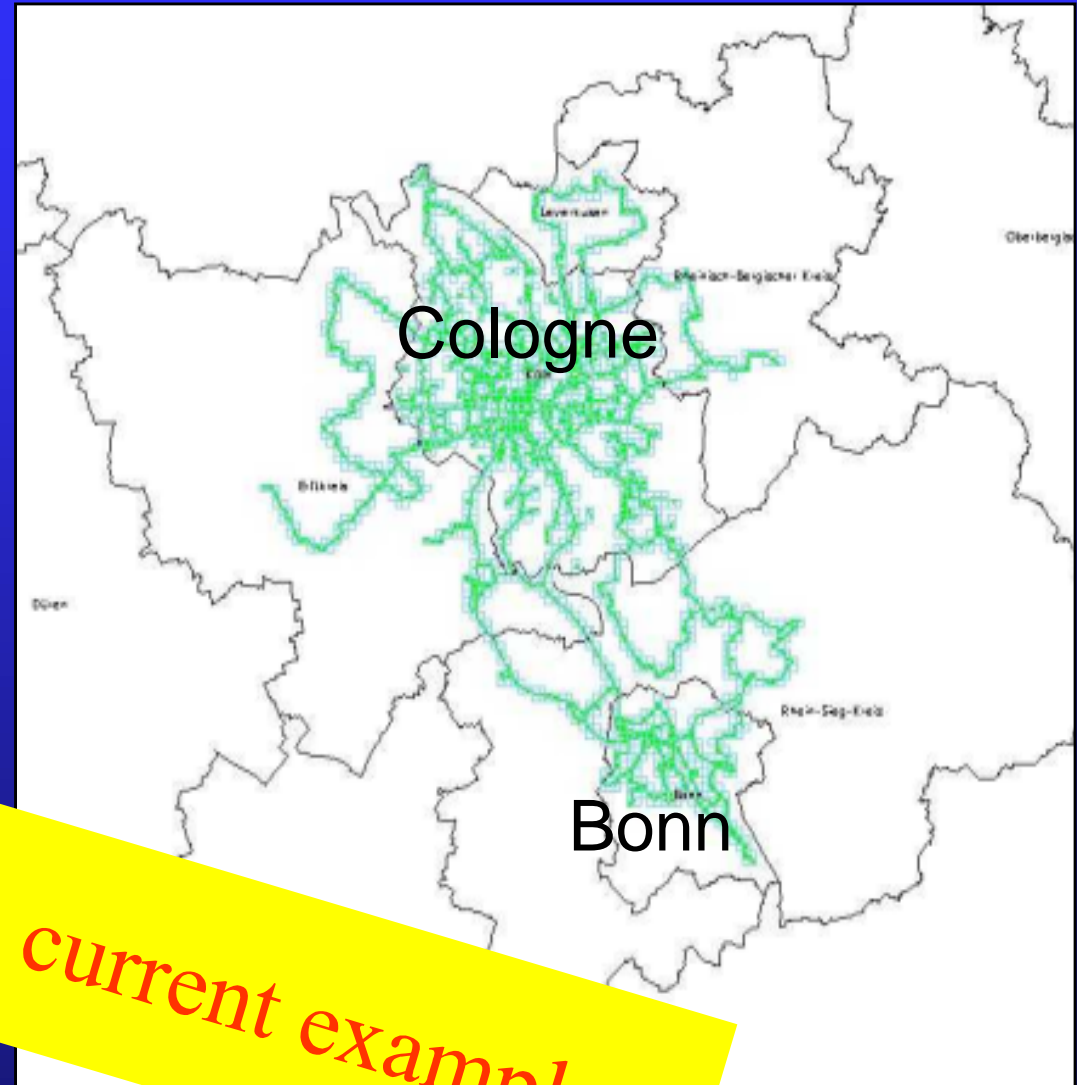


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NetCologne – communication service provider

polygons with a
border of +/- 50 m

cadastral
geobasisdata
for a cable-GIS



current example

by Mark Büdenbender GSI





demands of the geodata market

⇒ interregional geobasisdata should be

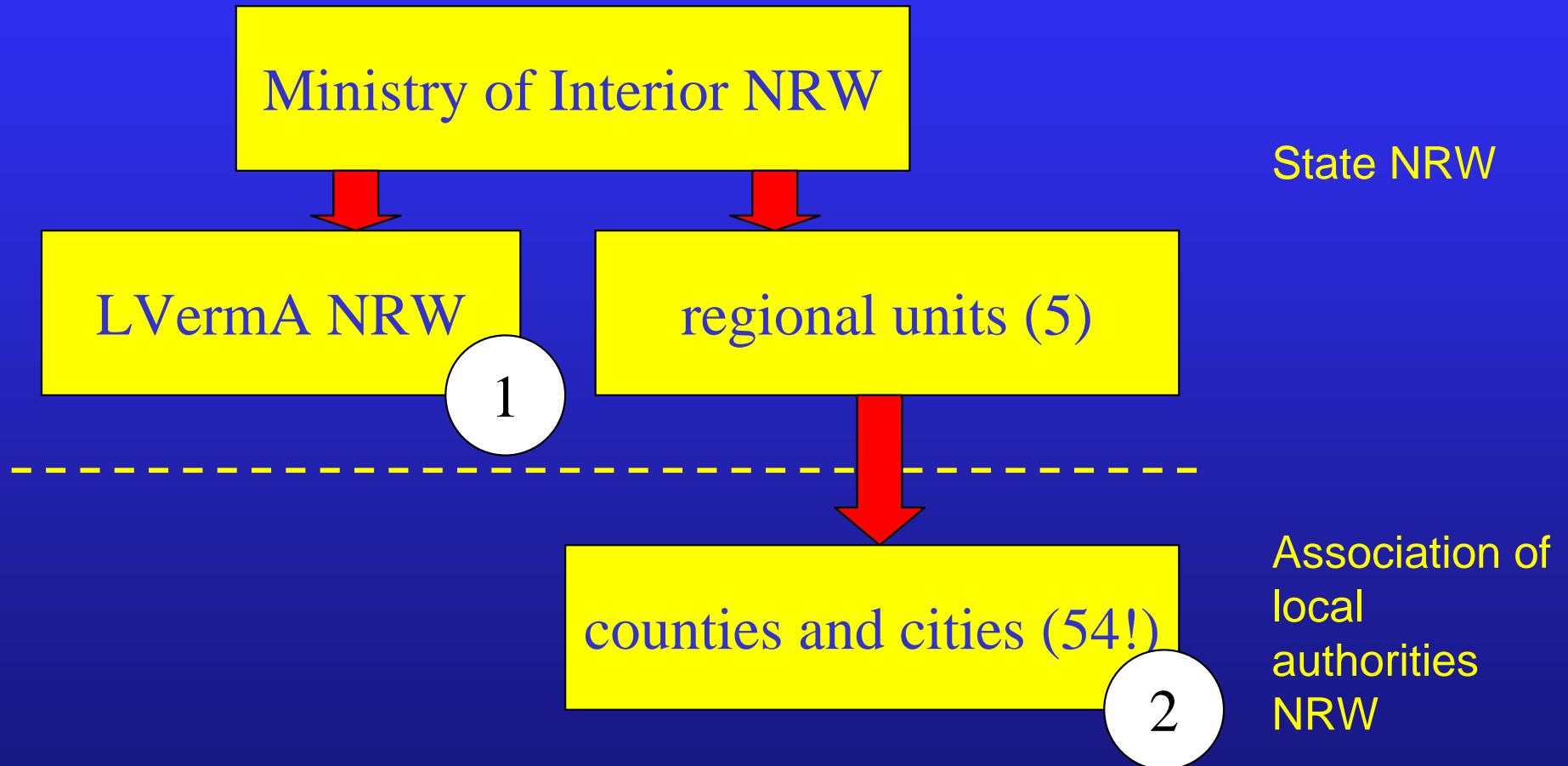
- complete
- homogenous
- up to date
- provided and distributed by standard conditions, e.g. data-format and dues
- distributed by *one service*

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*organisation of the surveying/mapping and
cadastral administration*





the surveying/mapping and cadastral
administration as a *data provider* for
the product geobasisdata NRW:

1

geobasisdata of the land surveying and mapping
level of resolution $> 1:5.000$

2

geobasisdata of the real estate cadastre
level of resolution $< 1:5.000$

⇒ below focussing on cadastral geobasisdata



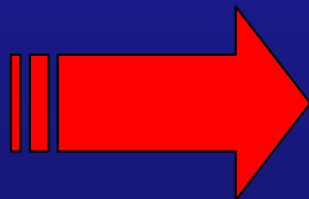
problems

⇒ divergency between inquiries of the geodata market and geobasisdata on offers by cadastral offices as a data provider

⇒ in “worst case” an interregional agitating user has to contact 54 different cadastral offices with different data management resp. GI-systems and different distribution conditions !

agenda / solution

⇒ installation of a central providing and distribution service for the special target group of interregional agitating users which use cadastral geobasisdata of more than one cadastral administration



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54 different cadastral offices with different data management
resp. GI-systems for cadastral geobasisdata

Liegenschaftsbuch Programmsystem ALB

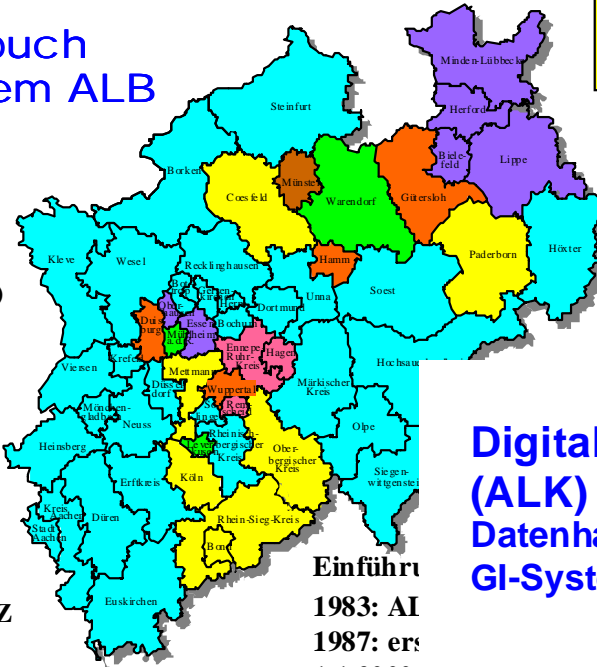
Stand 03.2001

Plattformen:

- UNIX/INFORMIX (SIM)
- IBM MVS/IMS
- UNIX/C-ISAM
- SNI BS2000/
SESAM
- Hochtief/Augustus - Test

ALB-relational:

- IBM bzw HP
UNIX/DB2
- RELIANT UNIX
(Siemens) / INFORMIX (KDVZ
Siegen) - Test



Einführung
1983: AI
1987: er
1.1.2000:
ein

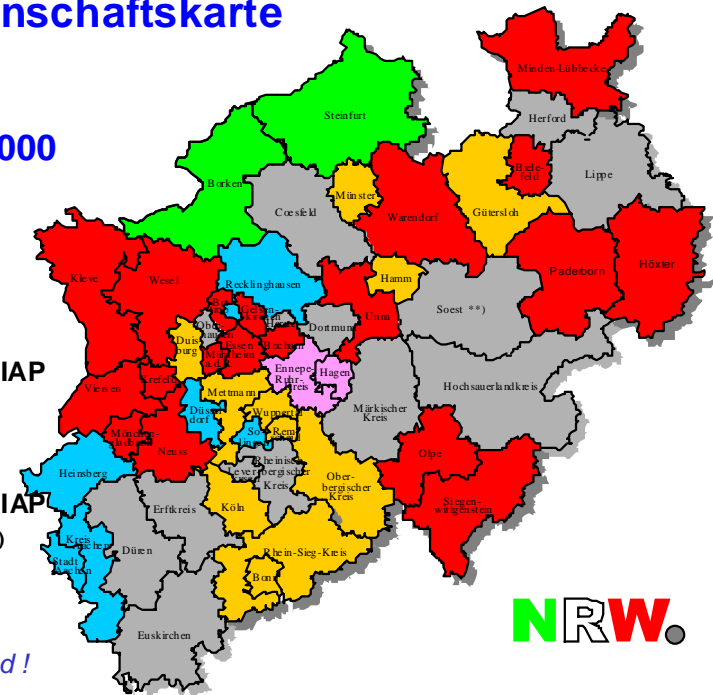
Automated Real Estate Register (ALB)

Digitale Liegenschaftskarte (ALK)

Datenhaltung
GI-Systeme 99/2000

GI-System:

- ALK-DB, ALK-GIAP
- SNI-SICAD
- IBM-GTIS
- EZSi
- AED-IDB, ALK-GIAP
- SMALLWORLD*)



NRW

Automated Real Estate Map (ALK)

[back](#)

Entwicklung ist fließend !

*) Hagen, Enn-R-Kr. In Migration 2000

**) Soest ab 2001

Stöppler LVermANRW, aktual. Nach AED-Angaben v. 20.12.1999, f.w. ergänzt



3. administration agreement – tasks -

„Administration agreement about the statewide distribution and providing of geobasisdata of the Real Estate Cadastre in NRW“

14.07.2000

between the State NRW

– represented by the LVermA NRW –

and

the Communes NRW / 54 counties and cities

– represented by their cadastral offices -

Intention:

- ⇒ to improve the customer service
- ⇒ to advance the distribution and use of cadastral geobasisdata



§1 Geodata Center NRW

installation at the LVermA NRW !

tasks:

1. Distribution of cadastral geobasisdata to customers

- ⇒ customer consulting
- ⇒ building up an Metainformation System
- ⇒ advancing the distribution and use of geobasisdata
- ⇒ allocation of usage rights

2. Sustainable advancement of the economic potential of geobasisdata respected to

- ⇒ publicity
- ⇒ availability
- ⇒ possibility of integration and use



§3 Coordinating Committee

installation of a coordinating committee with the following members (representing):

- Ministry of Interior (State NRW)
- Geodata Center NRW (LVermA)
- Städtetag NRW (cities)
- Landkreistag NRW (counties)

tasks:

- ⇒ clarification of special questions
- ⇒ formulation of additional appointments
e.g. to regulate dues in special cases or to regulate the data distribution in a special format to special conditions a.o.



§2 Cooperation

The local cadastral offices abandon their cadastral geobasisdata to the LVermA (Geodata Center NRW) ...

The competence of the local cadastral offices for their cadastral geobasisdata will not be touched ...

§5 Contracts with customers

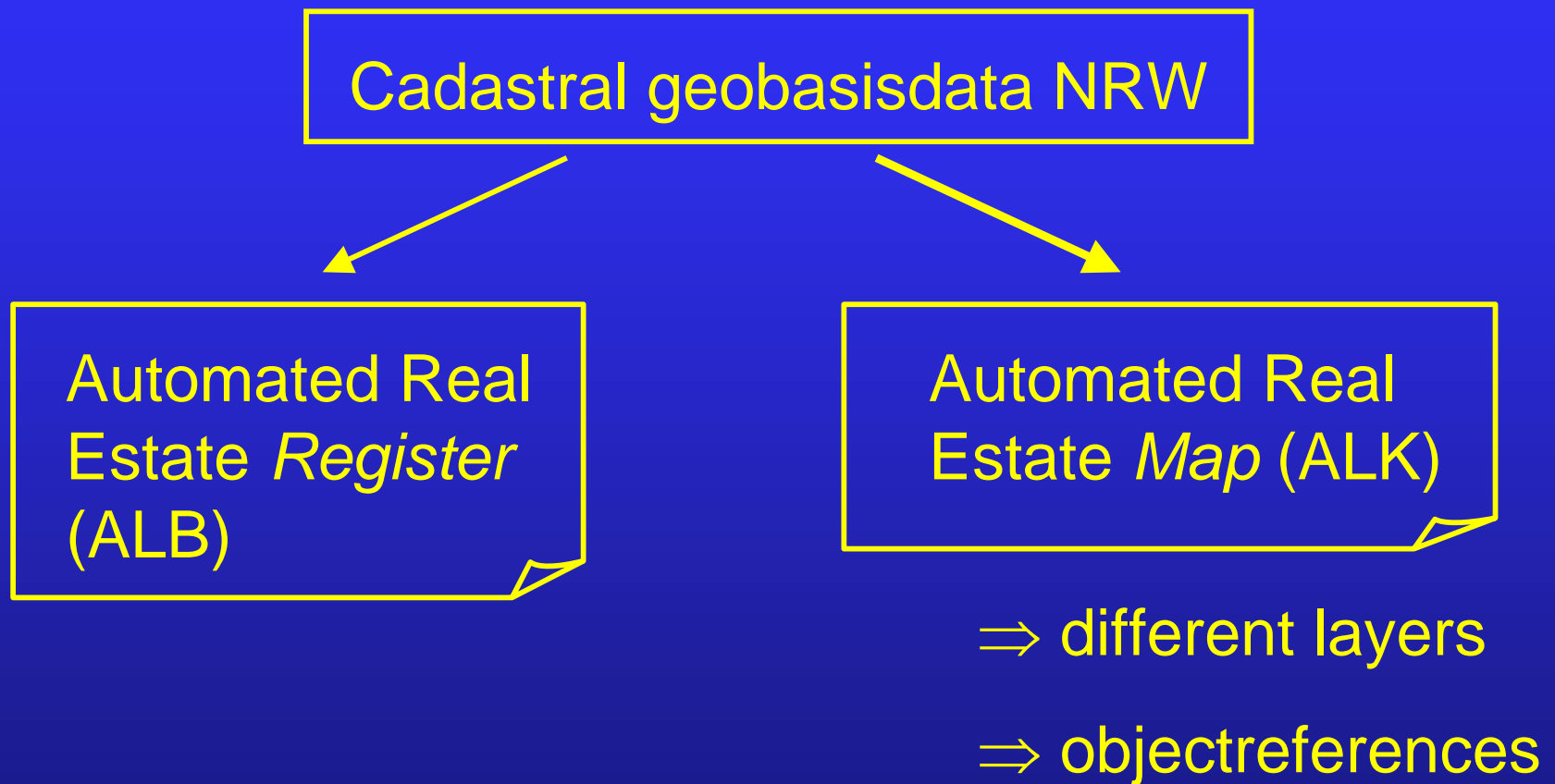
The LVermA (Geodata Center NRW) achieves normally commissions which contains the area of more than one cadastral administration.

§6 Accounting the gains

The accounts will be divided in ratio to 30 : 70 between the LVermA (Geodata Center NRW) and the cadastral offices.



4. products of the Geodata Center NRW



Geodata Center NRW - tasks and products -



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Automated Real Estate Register (ALB)

objects/data contents

- ⇒ parcel identifier
- ⇒ personal data
- ⇒ location (street name, house number)
- ⇒ area in square-meters
- ⇒ land use (vegetation)
- ⇒ property information (name, address, land register identification)

availability: 100 % statewide NRW

data-format: WLDG/WLDGE

Auszug aus dem Liegenschaftskataster		Flurstück 053603-001-00948/000 9	
- Liegenschaftskarte -		Datum 20.03.1995 00 Seite 1	
***** Flurstücksnummer *****			
Katasterparz.	3330	Stadt	Reckestr. 25
Gemarkung	053603	Postleitzahl	99999 Astdt
Gemeinde	05163024	Wahlkreis	Test-Dorf
Kreis/Stadt		Landkreis	Astdt
Finanzamt	5160	Finanzamt	Astdt
Forstamt	3333	Forstamt	Astdt

Gekg	Flr	Flurst-Nr	#
053603	1	948	9
Entstehung		1995/0013-44	
Liegenschaftskarte		9881-6 80	
Koordinaten		2588503-0 5681572-5	
Lage		auf der Höhe	

Tatsächliche Nutzung			
355 m2	21-520	Weg	
1 921 m2	21-610	Ackerland	
3 479 m2	21-610	Ackerland	
7 088 m2	21-610	Ackerland	
12 423 m2	21-610	Ackerland	
15 412 m2	21-610	Ackerland	
930 m2	21-730	Mischwald	

Fläche		*****41 568 m2	

Klassifizierung		32 Land- und forstwirtschaftliches Verzeichnis	
1 921 m2	32-211	Ackerland	
3 479 m2	32-211	Ackerland	
7 088 m2	32-211	Ackerland	
12 423 m2	32-211	Ackerland	
15 412 m2	32-211	Ackerland	
930 m2	32-251	Waldung	
Summe		41 253 m2	
Vorgängerflurstück		053601-029-00948/000	
Amtsgericht		1111 Astdt	
Grundbuchbezirk		053601 Edorf	
Bestand		053601-1500 & Bvnr - 7 (N) Eigentum	

Der Auszug ist maschinell erstellt und ist ohne Unterschrift gültig.			
Die Veröffentlichung des Auszuges ist durch eine Erklärung oder Bescheinigung - nur bei Zustimmung des Katasteramtes - als Zustimmung des Katasteramtes zu bezeichnen.			
Erläuterungen zum Auszug			

Automated Real Estate Map (ALK)

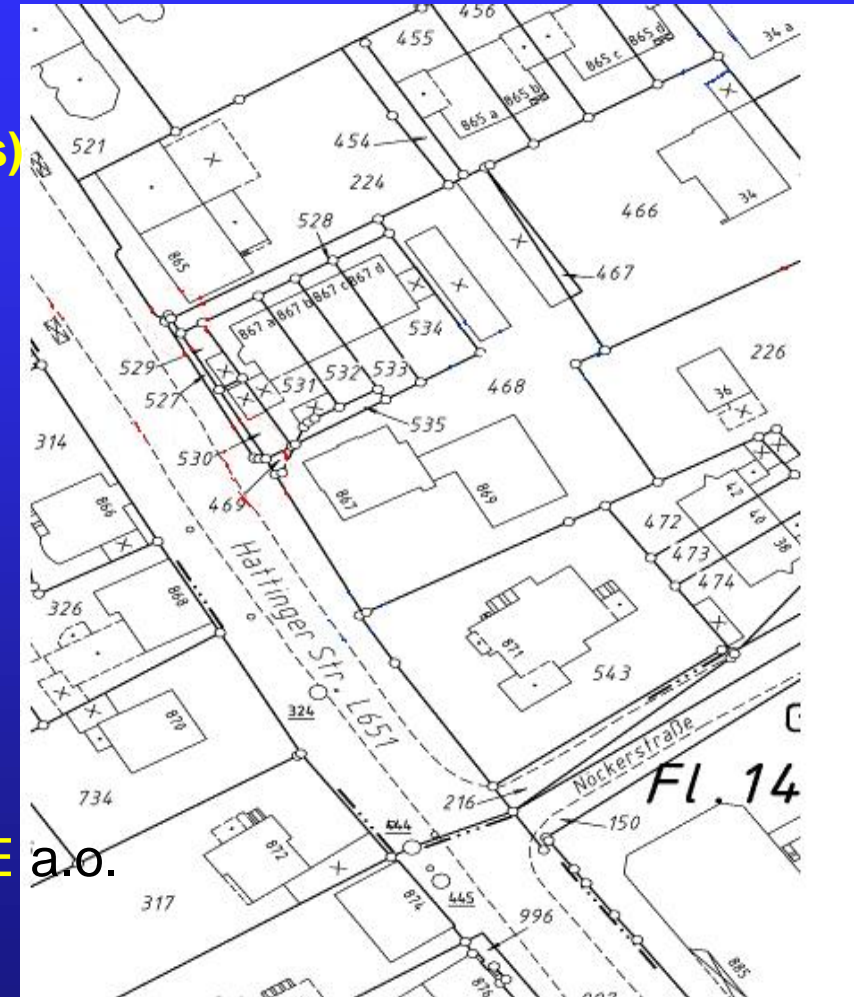
objects/data contents

- ⇒ parcels (identifiers, boundaries)
- ⇒ buildings (outlines)
- ⇒ political boundaries
- ⇒ land use
- ⇒ measurement points, texts
- ⇒ topographic elements
- ⇒ land evaluation and taxation

availability: 75 % statewide NRW

data-format:

- a) vector EDBS
 other DXF, SHAPE a.o.
- b) raster TIFF, GeoTIFF

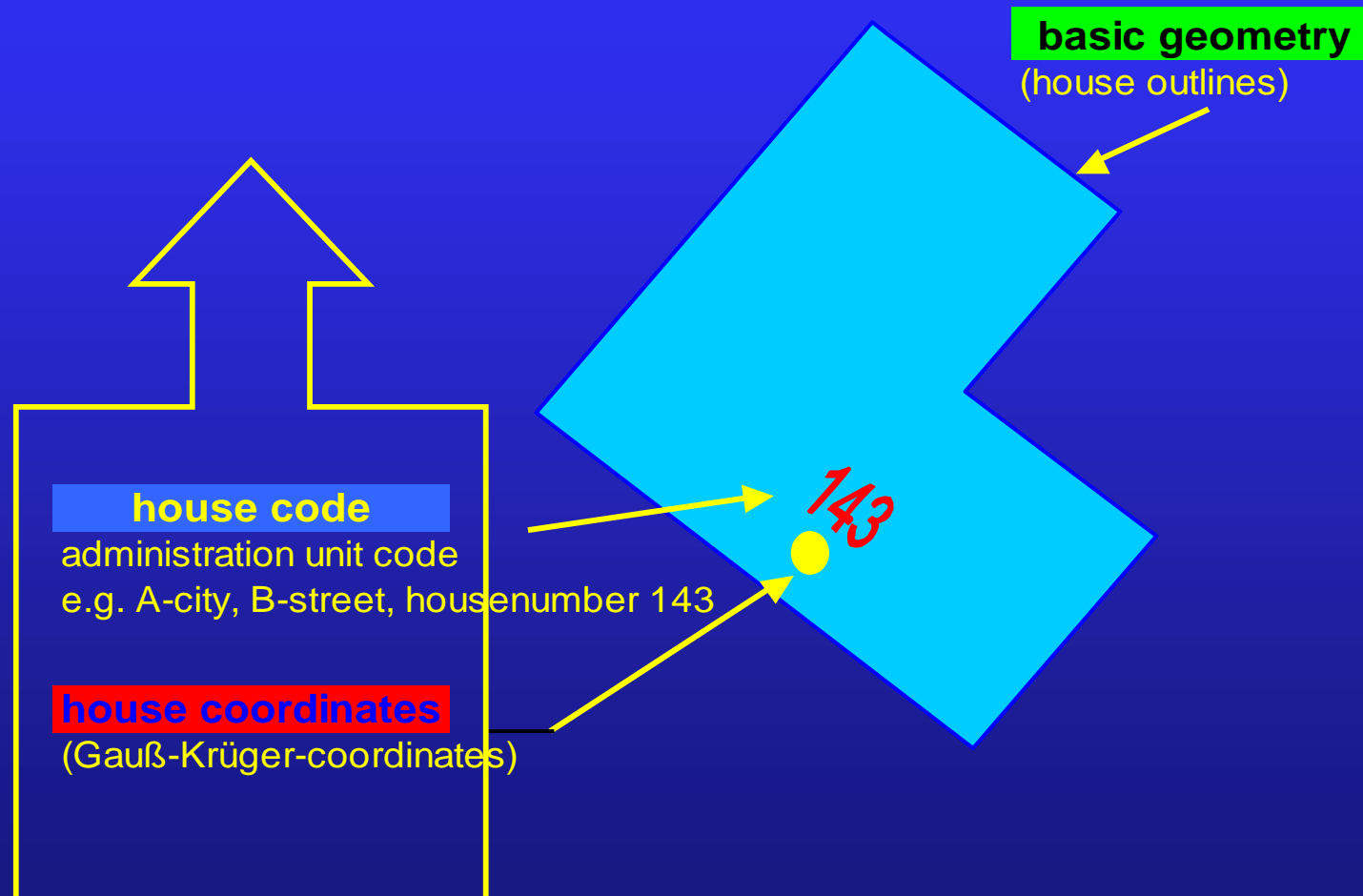


5. *house addresses NRW* – a special product –



- ⇒ the first own product of Geodata Center NRW
 - ⇒ a special kind of objectreference deviated to 75% from *ALK-data* and to 25% from *ALB-data* (as substitute for missing ALK-data)
 - ⇒ status 3/2003:
- 3,8 Mio. (georeferenced) *house addresses NRW*

the product *house addresses* =
positioning of a place name by its place coordinates





Example for a house addresses NRW - data file

house code	house coordinates	K	I
LL R KK GGG SSSSS HHHH ZZZZ NNN RRRRRRRR.RRR HHHHHHHH HHH Q II			
05;1;14;000;70006;0021;	c;001;2541477,000;5680016,000;A;00		
05;7;74;020;D2647;0015;	;001;3463651,000;5680016,000;B;02		
05;1;24;000;00016;0011;	a;001;2541477,000;5680016,000;A;00		
05;1;66;004;10115;0028;	;001;2541477,000;5680016,000;A;01		
05;5;15;000;00505;0000;	;001;2541477,000;5680016,000;A;00		

in near future additional with postal code information!

State

RegUnit

County/citivy

Dep. Comm.

streetname

Housenr.

HsNr-add.

Lfd. Nr.

Rechtswert Hochwert
Gauß-Krüger -coordinates

origin

Internal key
GeoDatZ

users of house addresses NRW

- branches of business

e.g. insurances, banks,
real estate and credit service,
location and network optimisation,
street/city map services,
delivery service, logistics
touristics, telematics
geomarketing

3,8 Mio. house addresses statewide



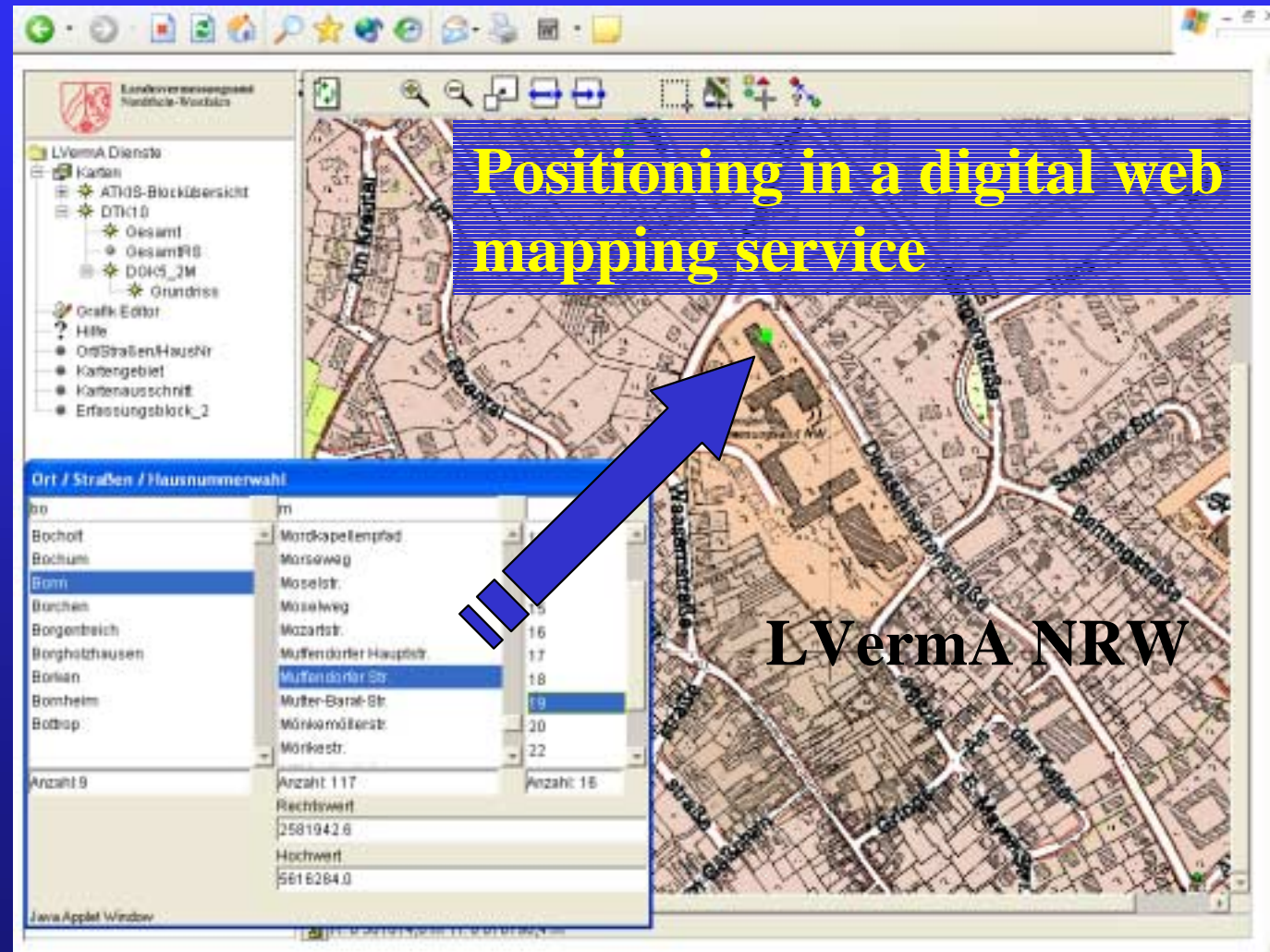
- distribution agencies (refinement)

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example for an application in the Web Mapping
Service *GEOSERVER* of the LVermA NRW





6. Prospects

new products:

- *house addresses Germany*

Distribution of house addresses nationwide by a central service at the LVermA (Geodata Center NRW) for a community of several states of Germany (GVHK) ⇒ **start in November 2003 !**

- *house outlines Germany*

distribution of building outlines(-polygons) with georeference to its place coordinates

combination of *house addresses* and *outlines*

⇒ a very *multifunctional adaptive product*

especially for *location based services*

Geodata Center NRW - tasks and products -



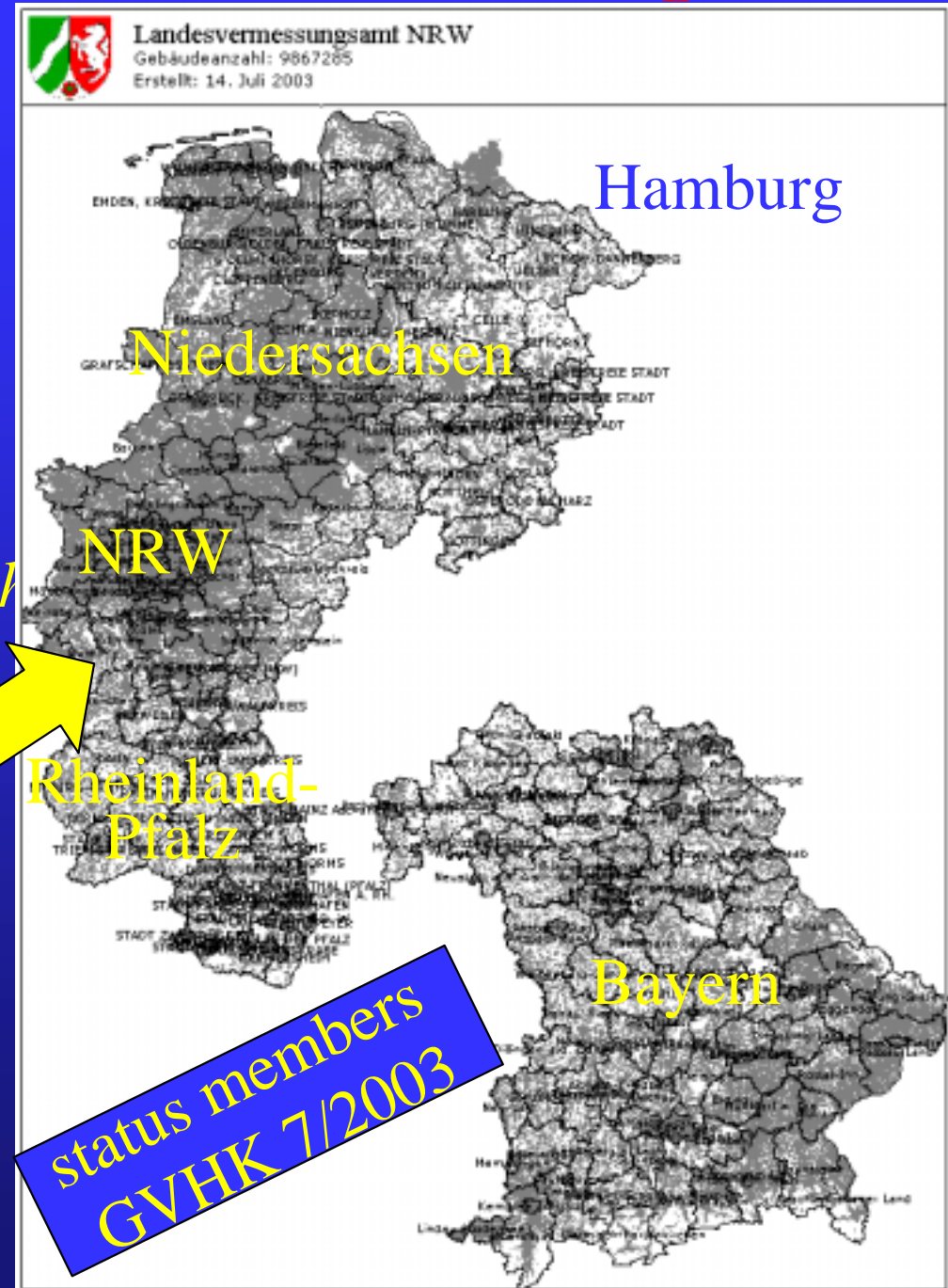
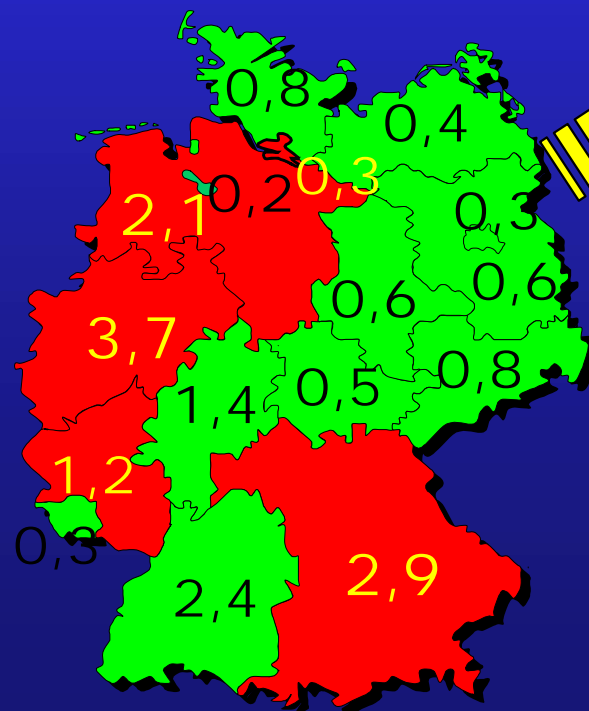
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house addresses Germany 7/2003:

NRW:	3.780.201
Bayern:	2.651.417
Niedersachsen:	2.106.414
Rheinl.-Pfalz:	1.071.049
Hamburg:	258.204

total 9.9 Mio

Germany total: ca. 18,5 Mio

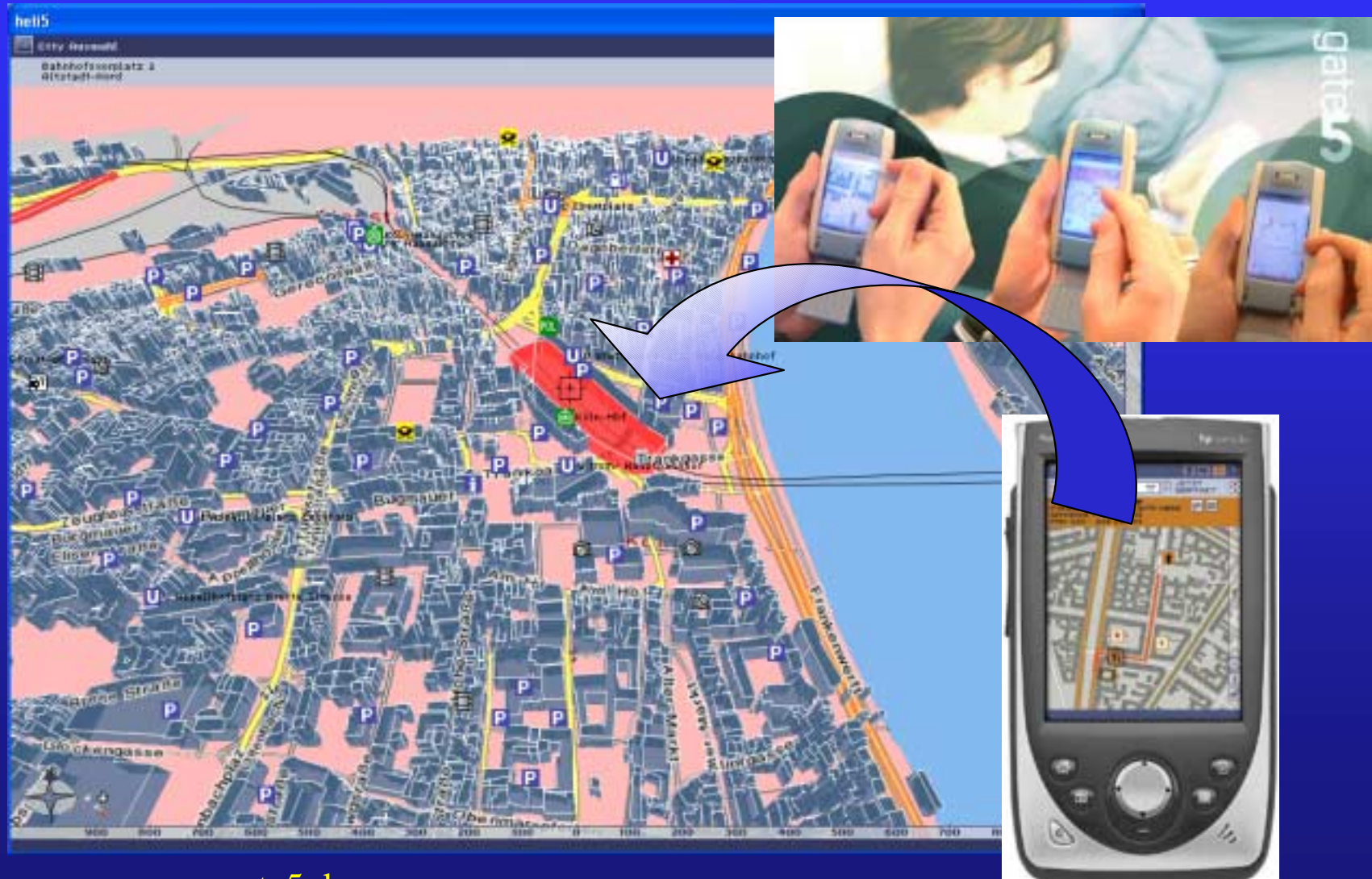


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the future ... location based services, 3D-city sceneries



source: www.gate5.de

by Mark Büdenbender 08.03.2004



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for further information visit our homepage on

<http://www.lverma.nrw.de>

Thank you for attention!