GeoGIS2005 – Manual - UK

# GeoGIS2005

Manual

December 2007



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## 1. GeoGIS2005 – General Description

GeoGIS2005 is a general framework for managing technical databases. The system includes a number of functions especially made for geological, geotechnical and water technical data and jobs.

GeoGIS2005 applies mainly to public institutions, consultants and contractors.

Data may be viewed in data lists, graphs, documents and maps. The user may import/export data in a number of different formats. Especially worth mentioning is the correlation between GIS-systems such as MapInfo, ArcGIS, GIS Viewer and Google Earth.

GeoGIS2005 is developed by RAMBØLL and is sold on a license basis. GeoGIS2005 is a further development of the former GeoGIS2000. It is possible to access databases used in connection with GeoGIS2000 from the GeoGIS2005 version.

In GeoGIS2005 it is possible to visualise data from the Jupiter database, which is run and maintained by GEUS. The Jupiter database now includes geological, hydro geological and chemical groundwater data from everywhere in Denmark.



Figure 1. Jupiter with typical data contractors and partners.

# 2. User interface

Data in GeoGIS2005 are listed in database windows. The user may open several database windows at a time.

GeoGIS2005 displays data in a tree structure similar to the Windows Explorer. For each select made in the tree structure to the left, the corresponding data will show to the right. If there are sub-folders to the selected folder, data will show in a tabs structure.

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iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	Sa	Sample         Lagent           Imples         Sample           1         2           3         4           5         6           7         0           9         10           11         11	Type TB R T R T R T R T R T R T R T R T	Depth 0.50 1,00 1,50 2,50 3,00 3,50 4,00 4,50 5,50	Length 0,000 0,000 0,000 0,000 0,000 0,000 0,000 0,000 0,000 0,000 0,000 0,000	Borehole Log           2.40         FI           1.90         FI           1.90         FI           1.40         FI           0.40	Vescription LLL SAND, for LLL SAND, for LLL SAND, for LLL SAND, for LLL SAND, for LL, SAND, for LLY, stayes, fo LAY, stayes, fo LAY, titly, san LAY, TILL, sa	nalyces   Gas pool, silv, w ne, sorted, w ne - medium, ne, well sorter ne, well sorter ht brown, GY ndy, al gravel inesandy, al li ndy, gravely, ndy, gravely	Few grav few corted, d. light gn d. light gn d. light gn d. light gn T.T.J.A, b, w. layered, w. light w. iron	Groutin     Layv     el.     7     7     7     7     7     7     7     7     7     7     7     7     7     7	g Injectio or series	Layer		Seq. Field Group: 1 O Company 1 Job No. 2 Boing - Group: 2 3 Sample - Group: 10 4 Type 5 TB		Value Master Keys DGI 15311451 96.0.001 Key 1 Data R T	
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11		Cayour           Sample           1           2           3           4           5           6           7           0           9           10           11           12           13           14           15           16	Type         TB           R         T           R         T           R         T           R         T           R         T           R         T           R         T           R         T           R         T           R         T           R         T           R         T           R         T           R         T           R         T           R         T           R         T           R         T           R         T	Depth           0.00           1,00           1,00           2,00           3,00           3,00           4,50           5,50           6,625           6,50           7,00           7,50	Length  Constraints  Length  Constraints  Co	Borehole Logi           2,40         FI           1,90         FI           1,90         FI           0,30         FI           0,40         FI           0,40         FI           0,40         FI           0,50         FI           -1,10         G           -2,50         G           -3,10         G           -3,35         G           -4,50         G           -4,60         G	Hesciption Hesciption LL: SAND, 6 LL: SAND	nalyzes Gas cosol, sty, w ne, sorted, w ne, sorted, w ne, well sorter ne, well sorter ne, well sorter h brown, GY ndy, gravely ndy, gravely	Few grav few corted, d. light gn d. light gn d. light gn d. light gn d. light gn T.T.JA, by w ayered, w light w iron w iron w iron w iron w iron	Groutin     Lay     Cl	er series			Sec. Field Group 1 0 Company 1 Job No. 2 Boing - Group 1 3 Sample - Group 1 4 Type 5 TB 6 Depth 7 Length 8 Level 9 Core Run 10 Recovery		Value Master Keys DGI 15331451 96.0.001 Key 1 Data R T 0.50 0,00	
i: □ Gas Sangles     i: □ Gas Sangles     i: □ Gas Sangles     i: □ Decoments     i: □ Solo03:-C0     i: Solo03:-C		Sample Sample 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Type         TB           R         T	Depth         0.50           1,00         1,50           2,00         2,50           3,00         3,50           4,00         5,50           5,50         6,00           6,25         6,50           7,50         8,50           7,50         8,00	Length 0.00 0,00 0,00 0,00 0,00 0,00 0,00 0,0	Borehole Log           Level         D           2,40         FI           1,50         FI           1,40         FI           0,40         FI           -1,10         G           -1,10         G           -2,10         C           -3,25         C           -3,35         C           -3,35         C           -4,60         C           -4,60         C           -5,10         Q           -5,10         Q	lescription ILL SAND, 6 ILL SA	nalyzes Gas cool, sty, w ne, sorted, w, ne e - medium, ne, well sorter ne, well sorter he borom, GY hdy, sI, gravely, ndy, gravely,	Few grav few grav few sorted, d. light gn d. light gn T.I.A. b, w. systed, w. Systerd, w. Systerd, w. Systerd, w. Systerd, w. Systerd, w. Systerd, w. Systerd, S. Sorted, S. Sor	Logy eL sy sy sy sy sy sy sy sy sy sy sy sy sy	er series			Seq Field Group 1 Job No. 2 Being - Group 2 3 Sangle 5 TB 6 Depth 7 Length 8 Level 9 Core Run 10 Recovery 11 Core los	) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )	Value Master Keys DGI 15331451 96:0.000 Key Data R T 0.50 0.00	
11		Service 2 Service 2	Type         10           R         T <td>Depth         150           1,00         1,50           1,00         2,00           2,00         3,00           2,50         3,00           3,50         6,00           5,50         6,00           6,00         7,90           8,00         8,00</td> <td>Stand rige:         Iteraph           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00</td> <td>Borehole Log           2.40         FI           1,90         FI           1,40         FI           1,40         FI           0,40         FI           0,40         FI           0,40         FI           0,40         FI           0,50         FI           0,60         SI           -1,10         CI           -2,10         CI           -2,60         CI           -3,25         CI           -3,350         CI           -4,10         CI           -4,510         CI           -5,510         CI           -5,510         CI</td> <td>Perception LL SAND, 6 LL SAND, 6 LL, SA</td> <td>nayces Gas cosol cito, w ne, sorted, w ne, sorted, w ne, well sorte ne, gavely, ndy, gavely, ndy, gavely, ndy, gavely, ndy, gavely, ndy, gavely, ndy, gavely, ndy, gavely, ndy, gavely, Ne, g</td> <td>For a second sec</td> <td>Layer eL yy yy yy yy yy yy yy yy yy yy yy yy yy</td> <td>er series</td> <td></td> <td></td> <td>Seq. Field Group: 1 O Company 1 Job No. 2 Bong 3 Sample 3 Group: 10 4 Type 5 TB 6 Depth 7 Length 8 Level 9 Core Run 10 Recovel 11 Core fice</td> <td>at top a</td> <td>Value Master Keys DGI 15311451 96:0:001 Keys 1 Data R 7 0:50 0:00</td> <td></td>	Depth         150           1,00         1,50           1,00         2,00           2,00         3,00           2,50         3,00           3,50         6,00           5,50         6,00           6,00         7,90           8,00         8,00	Stand rige:         Iteraph           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00	Borehole Log           2.40         FI           1,90         FI           1,40         FI           1,40         FI           0,40         FI           0,40         FI           0,40         FI           0,40         FI           0,50         FI           0,60         SI           -1,10         CI           -2,10         CI           -2,60         CI           -3,25         CI           -3,350         CI           -4,10         CI           -4,510         CI           -5,510         CI           -5,510         CI	Perception LL SAND, 6 LL SAND, 6 LL, SA	nayces Gas cosol cito, w ne, sorted, w ne, sorted, w ne, well sorte ne, gavely, ndy, gavely, ndy, gavely, ndy, gavely, ndy, gavely, ndy, gavely, ndy, gavely, ndy, gavely, ndy, gavely, Ne, g	For a second sec	Layer eL yy yy yy yy yy yy yy yy yy yy yy yy yy	er series			Seq. Field Group: 1 O Company 1 Job No. 2 Bong 3 Sample 3 Group: 10 4 Type 5 TB 6 Depth 7 Length 8 Level 9 Core Run 10 Recovel 11 Core fice	at top a	Value Master Keys DGI 15311451 96:0:001 Keys 1 Data R 7 0:50 0:00	
11		Sample Sample 2 3 4 5 5 6 7 0 9 9 10 11 12 13 14 15 16 17 18 18 K1	Type         T0           R         T <td>Depth         0.50           1,00         1,50           1,00         2,50           2,00         3,00           3,50         4,00           4,50         5,50           6,50         6,50           6,50         6,50           6,50         6,50           7,50         6,00           8,60         8,00</td> <td>Used rige           0.00</td> <td>Borehole Log           Level         D           2.40         T           1.90         FI           1.40         FI           0.50         FI           0.40         FI           3.55         CL           4.50         CL           4.50         CL           5.10         CL           5.40         FI</td> <td>ILL SAND, IS ILL S</td> <td>nalyces Gas copol, sithy, w ne, sorted, w, ne, well sorter, ne, well sorter, ne, well sorter, ne, well sorter, ne, well sorter, ndy, gravely, ndy, gravely, ndy,</td> <td>Tow grav few souted, d. light grav d. light grav d. light grav tTJA, b, w. w. icon gravith w. icon gravith w. icon gravith w. icon gravith w. icon gravith grav to the gravith to the gravith to the gravith to the to the</td> <td>Layn Layn 97 97 97 97 97 97 97 97 97 97 97 97 97</td> <td>er series</td> <td></td> <td></td> <td>Seq Field Group: 1 Job No. 2 Being Group: 1 Job No. 2 Being Group: 10 Group: 10 4 Type 5 T8 6 Deph 7 Length 8 Level 9 Cos Plus 10 Core loss Copy 5 Sample</td> <td>at top o</td> <td>Value Master Keys DGI 15311451 Sec 0001 Key 1 Data R 7 0.00 0.00</td> <td></td>	Depth         0.50           1,00         1,50           1,00         2,50           2,00         3,00           3,50         4,00           4,50         5,50           6,50         6,50           6,50         6,50           6,50         6,50           7,50         6,00           8,60         8,00	Used rige           0.00	Borehole Log           Level         D           2.40         T           1.90         FI           1.40         FI           0.50         FI           0.40         FI           3.55         CL           4.50         CL           4.50         CL           5.10         CL           5.40         FI	ILL SAND, IS ILL S	nalyces Gas copol, sithy, w ne, sorted, w, ne, well sorter, ne, well sorter, ne, well sorter, ne, well sorter, ne, well sorter, ndy, gravely, ndy,	Tow grav few souted, d. light grav d. light grav d. light grav tTJA, b, w. w. icon gravith w. icon gravith w. icon gravith w. icon gravith w. icon gravith grav to the gravith to the gravith to the gravith to the to the	Layn Layn 97 97 97 97 97 97 97 97 97 97 97 97 97	er series			Seq Field Group: 1 Job No. 2 Being Group: 1 Job No. 2 Being Group: 10 Group: 10 4 Type 5 T8 6 Deph 7 Length 8 Level 9 Cos Plus 10 Core loss Copy 5 Sample	at top o	Value Master Keys DGI 15311451 Sec 0001 Key 1 Data R 7 0.00 0.00	
iii ⊕ Gas Samples     iii ⊕ Gas Samples     iii ⊕ Gas Samples     iii ⊕ Gascuments     iii ⊕ Gascuments     iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii		Sample Sample 2 3 4 4 5 6 6 7 7 9 9 10 11 12 13 14 15 16 17 18 16 17 18 14 15 16 17 18 19	Type         18           R         T <td>Depth         0.50           1,00         1.50           2,00         2.00           2,200         3.00           3,00         4.00           4,00         5.50           6,50         6,55           6,50         6,50           7,00         8,00           8,00         8,00           8,00         8,00</td> <td>Unit         0.00           0.00         0.00</td> <td>Borehole Log           2,40         D           1,90         Fil           1,90         Fil           0,00         Fil           0,40         Fil           0,40         Fil           0,40         Fil           0,40         Fil           0,40         Fil           0,40         Fil           -1,10         G           -2,10         C           -3,15         C           -3,350         C           -3,350         C           -4,600         C           -5,10         G           -5,10         G           -5,40         Fil</td> <td>lescription Hescription LLL SAND, for LLL SAND, for LLL SAND, for LLL SAND, for LLL SAND, for LLL SAND, for LLL SAND, for SAND, for SAND</td> <td>nalyces Gas cocid, rithy, wi ne, sorted, w, ne, well sorter ne, well s</td> <td>Iow grav few souted, d. light gr d. light gr T.I.J.A, b, w. sourced, w. ion w. ion w.</td> <td>Layn et. yy yy yy yy a  t</td> <td>er series</td> <td>Layer</td> <td>F1:</td> <td>Seq. Field Company Com</td> <td>) ) at top 0 c logy - Set</td> <td>Value Master Keys DGI 15311451 S80.000 Key Data R T 0.50 0,00 0,00</td> <td></td>	Depth         0.50           1,00         1.50           2,00         2.00           2,200         3.00           3,00         4.00           4,00         5.50           6,50         6,55           6,50         6,50           7,00         8,00           8,00         8,00           8,00         8,00	Unit         0.00           0.00         0.00	Borehole Log           2,40         D           1,90         Fil           1,90         Fil           0,00         Fil           0,40         Fil           0,40         Fil           0,40         Fil           0,40         Fil           0,40         Fil           0,40         Fil           -1,10         G           -2,10         C           -3,15         C           -3,350         C           -3,350         C           -4,600         C           -5,10         G           -5,10         G           -5,40         Fil	lescription Hescription LLL SAND, for LLL SAND, for LLL SAND, for LLL SAND, for LLL SAND, for LLL SAND, for LLL SAND, for SAND, for SAND	nalyces Gas cocid, rithy, wi ne, sorted, w, ne, well sorter ne, well s	Iow grav few souted, d. light gr d. light gr T.I.J.A, b, w. sourced, w. ion w.	Layn et. yy yy yy yy a  t	er series	Layer	F1:	Seq. Field Company Com	) ) at top 0 c logy - Set	Value Master Keys DGI 15311451 S80.000 Key Data R T 0.50 0,00 0,00	
11 E Gas Sangles 12 Gas Sangles 13 Gas Gas Conservation 14 Gas Gas Conservation 15 Gas Co		Sample 1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 K1 19	Type         TB           R         T           C         T           C         T	Depth         0.50           0.50         1.00           1.50         2.00           2.50         3.00           2.50         3.00           4.50         5.00           5.50         6.00           5.50         6.00           7.50         6.00           8.60         7.00           7.50         8.00           8.00         8.00	Length 0.00	Borehole Log           2.40         FI           1.90         FI           1.40         FI           1.90         FI           0.30         FI           0.40         FI           0.41	ILL SAND, IS ILL S	nalyces Gas option, sithy, wi ne, sorted, w, ne, well sorter ne, well	Few grav few sorted, d. light grav d. light grav TTJA, b, w speed, s	Layy 1997 1977	er series	Layer		Seq. Field Group. 1 Job No. 2 Borng 2 Borng 3 Group. 2 3 Group. 2 4 Taple 5 TB 6 Depth 8 Level 9 Level 9 Level 9 Level 10 Core loss Corp. 3 Group. 2 11 Core loss Corp. 5 Core loss Core loss	o at top o c logy - Sel	Value Matter Keys DGI 1 15311451 96.0001 Keys 1 0 Data R T 0.50 0.50 0.50 0.50	

Figure 2. An example of a database window showing data from GeoGIS2005 - BRegister. To the left is the tree structure, to the right data in lists and tabs.

Data grids, Graphs and Documents are the three main forms for showing data in the database window. The documents may both be local documents or links to external pages on the Internet.

## 2.1 Windows and Viewing Data

The windows are set up in the Meta database. See section 4. At installation, GeoGIS2005 includes a ready set up meta database with the following applications:

- GeoGIS : Application for registering geotechnical data
- JupiterXL : Application for managing data from the GEUS Jupiter database
- RMS : Application for managing road survey data

In general, it is not necessary to adjust the windows. If it proves necessary, adjusting should be made by a super-user. Changes may be discarded when new versions are installed.

#### 2.1.1 Datagrid

Samp	ples Layers	Grain Sia	e Distributi	ons Proctor	Stand Pipes	Borehole L	.ogging Soil Analyses Gas Samples Grouting Injections Documents								
Sa	mples													C	ב
	Sample	Туре	TB	Depth	Length	Level	Description	^		Seq.	Field	Value		Hide	^
	25	C	T	18,05	1,50	-15,15		1	•	+	Group: 1	Master Keys			
	25A	S	Т	18,05	1,00	-15,15	0 - 100 cm: ICLAY TILL, sandy, very gravelly, w. lime grains, grey \$GI £Gc		-		Group: 2	Keu	-		
	25B	S	Т	19,05	0,50	-16,15	100 · 150 cm: Inot described			Ľ				ᆜ	
•	26	С	Т	19,55	1,40	-16,65	Sand			3	Sample	26			
	26A	S	T	19,55	0,21	-16,65	0 - 21 cm: ISILT TILL, clayey, very sandy, sl. gravelly, grey \$GI £Gc			Ŀ	Group: 10	Data			
	26B	S	Т	19,76	0,07	-16,86	21 - 28 cm: ISAND, fine, poorly sorted, silty, grey \$Mw £Gc			4	Туре	С			
	26C	S	Т	19,83	0,40	-16,93	28 - 68 cm: ISAND TILL, very clayey, silty, gravelly, w. clay till parts, rich in pockets	Ξ		5	ТВ	Т			
	K3	E	T	20,00	0,00	-17,10				6	Depth	19,55			-
	26D	S	Т	20,23	0,26	-17,33	68 - 94 cm: ISAND TILL, very clayey, silty, gravelly, w. lime grains, grey \$GI £Gc			7	Length	1,40			
	26E	S	Т	20,49	0,28	-17,59	94 · 122 cm: ICLAY TILL, sandy, gravelly, w. lime grains, grey \$GI £Gc			8	Level	-16,65			
	26F	S	T	20,77	0,18	-17,87	122 - 140 cm: ISAND TILL, sl. clayey, silty, gravelly, w. lime grains, grey \$GI £Gc		-	9	Core Run	1,51			
	27	С	Т	21,05	1,50	-18,15			-	10	Recovery	93,00			
	27A	S	Т	21,05	0,52	-18,15	0 - 52 cm: ICLAY TILL, sandy, very gravelly, w. lime grains, w. sand parts, grey \$GI		-	11	Core loss at top o				
	27B	S	T	21,57	0,44	-18,67	52 - 96 cm: ISAND TILL, sl. clayey, silty, sl. gravelly, w. lime grains, w. many parts of		-	12	Diameter				
	27C	S	Т	22,01	0,54	-19,11	96 - 150 cm; ICLAY TILL, sandy, gravelly, w. lime grains, w. parts of poorly sorted		-	12	Description	Sand		-	
	28	C	Т	22,55	1,35	-19,65				13	Description	Sana			
	28A	S	T	22,55	0,15	-19,65	0 - 15 cm: ICLAY TILL, very sandy, verygravelly, grey \$GI £Gc				Group: 12	Advanced			~
	28B	S	Т	22,70	1,18	-19,80	15 - 133 cm: ISAND TILL, silty, very clayey, very gravelly, w. lime grains, w. silty sand		F1	: Cop	y Sample				
	28C	S	Т	23,88	0,02	-20,98	133 - 135 cm: ICLAY TILL, very sandy, very gravelly, w. lime grains, grey \$GI £Gc		F2	: Forr	nat Geology - Se	lected			
	K4	E	T	23,90	0,00	-21,00		~	F3	: Forr	nat Geology - Al				
•	4 34	of 11	1	* X											

Figure 3. An example of a window with a data grid with tabs.

The panel to the left contains data in a list form (data grid). The panel to the right contains detailed data for the current row in the list to the left. The database fields to the right are divided into groups you open and close with "+" and "-". In a similar way, the user may select fields to be hidden in the list by a click in the *Hide* column.

The colours of the fields in the data grid describe the fields' function, e.g.:

- yellow fields indicate unique key fields
- fields with blue text indicate links to other data, e.g. code lists
- grey fields calculated data and other non editable fields
- turquoise fields indicate changed data

In addition to this, the different windows may have a special colour table.

At the bottom of the right panel, you find a number of buttons for calling functions attached to the current data.

By use of the Ctrl key or a shortcut menu, you can call a number of standard functions for sorting, editing and setting up the layout. Shortcut keys are found to the right in the menu:

8,30	0,00 -5,40	
8,80	1.68 -5.90 0 - 168 cm: !CLAY TILL	, sandy, very grave
10,40	Edit >	, sandy, very grave
12,00	Find and replace Ctrl+E	
12,00	Sthe educted Contri	sandy, very gravelly
12,32	Fliter selected Ctri+K	• medium, poorly so
12,66	Search Ctrl+S	, sandy, very grave
12,85	Up level Ctrl+U	bed
13,55		, sandy, very grave
15,05	Refresh data Ctri+R	, sandy, very grave
16,00	Layout >	
16,55	Refresh layout Ctrl+Shift+R	, sandy, very grave
18,05		
18,05	Print >	, sandy, very grave
19,05	Draw Ctrl+O	ribed
19,55		
19,55	Export >	layey, very sandy, :
19,76	GIS >	, poorly sorted, silty
19,83		, very clayey, silty,
20,00	History Ctrl+H	
20,23	Metadata 🕨	., very clayey, silty,
20,49	0,28 -17,59 94 - 122 cm: IULAY TIL	L, sandy, gravelly, v
20,77	0,18 -17,87 122 - 140 cm: ISAND T	ILL, sl. clayey, silty,

Figure 4. Shortcut keys are found to the right in the menu.

Menus and toolbars are described in detail in section 5.

Code lists are managed through combo boxes or a code list selector. The user may select which type that is used in the extended detail window:

Code lists by use of Combo boxes

m	ples															
Sa	ample	Туре		TB	Depth	Length	Level	Description	^	Seq.	DB Field	Field	Value	F	lide	Comb
1		Remoulded Sample	•	Т	0,50	0,00	2,40	FILL: SAND, topsoil, silty, w. f		+		Group: 1	Master Keys			
2		Remoulded Sample	•	T	1,00	0,00	1,90	FILL: SAND, fine, sorted, w. fi	24			Group: 2	Kev			
3		Remoulded Sample	•	Т	1,50	0,00	1,40	FILL: SAND, fine - medium, so	d 😑 🛛 –		0.111	0.1		-		
4	-	Remodided Sample	-	I	2,00	0,00	0,90	FILL: SAND, fine, well sorted,	li 🔤	- 3	SAM	Sample	0			
5	1	Remoulded Sample	•	T	2,50	0,00	0,40	FILL: SAND, fine, well sorted,	li 🛛			Group: 10	Data			
6								AND, fine, well sorted,	li —	4	STYPE	Туре	Remoulded Sample 🛛 🗸			V
7		Core Sample Remark			<u>۱</u>			fine, light brown, GYT	<u> </u>	5	TB	TB				-8
8		Glass Sample						silty, sandy, sl. gravelly		6	D	Depth	2,50			
9	1	Lab. Sample						layey, finesandy, sl. laj	e	7	L	Length	0,00			
10	<u> </u>	Large Remoulded Sar	mple					[ILL, sandy, gravelly, li	<u>.</u>	8	level	Level	0,40	1		
11		SPT Sample Remoulded Sample						FILL, sandy, gravelly, w		9	CRUN	Core Run		1	✓	
12		Sub Sample		_	0.05	0.05	0.05	ILL, sandy, gravelly, g	ne -	10	RECOV	Recovery				
13		Intact Sample	•	·/	6,25	0,25	-3,35	CLAY TILL, very sandy, grave	4	11	CLTOP	Core loss at top o		1	<b>~</b>	
14		Remotadod Cample		т т	5,50	0,00	-3,60	CLAY TILL, sandy, gravely, w		12	DIAM	Diameter		1	<b>~</b>	
10	) :	Remoulded Sample	•	T	7,00	0,00	-4,10	CLAY TILL, sandy, gravely, w		13	DESCR1	Description	FILL: SAND, fine, well	1		
17	,	Remoulded Sample	-	T T	8.00	0,00	-4,00	CLAY TILL, sandy, gravely, F				Group: 12	sorted, light grey \$Fi EHe			_
18	1	Fore Sample	-	T	8.00	0,00	-5,10	0 - 88 cm: ICLAY TILL (0.27		_ <u>L</u> ·		citoup. 12	Mutaneou		2	
к1	· I	Bemark		T.	8.30	0,00	-5.40		- II -	15	LCOM	Lab. Company				
19	)	Core Sample		T	8.80	1.68	-5.90	0 · 168 cm: ICLAY TILL, sand		16	APREP	Handling			<b>Z</b>	
20	)	Core Sample	+	T	10,40	1,55	-7,50	0 · 155 cm: ICLAY TILL, sand	-	17	ACOM	Lab Company			<b>Z</b>	
21		Core Sample	•	т	12,00	1,35	-9,10		-	18	ALOC	Lab Loc.			2	
21	A	Sub Sample	•	т	12,00	0,32	-9,10	0 - 32 cm: ICLAY TILL, sandy		19	AREP	Lab Report				
21	в	Sub Sample	-	т	12,32	0,34	-9,42	32 - 66 cm: ISAND, fine - mec	i.	20	ADATE	Lab Date				
21	С	Sub Sample	•	T	12,66	0,19	-9,76	66 - 85 cm: ICLAY TILL, sand	ž. 📕	1: Cop	y Sample					
21	D	Sub Sample	•	T	12,85	0,50	-9,95	85 - 135 cm: Inot described	~	2: For	nat Geology	- Selected				
								3	1	3: For	nat Geology	- All				

Figure 5. Code lists by use of Combo boxes.

#### Code lists by use of Selector

Samples	s Layers	Grain Size D	istributions Procto	r Stand Pipes	Borehole Logg	jing Soil A	nalyses Gas Samples Grout	ing Inj	ection	ns D	ocuments						
Sam	ples																
9	Sample	Туре	TB	Depth	Length	Level	Description	^		Seq.	DB Field	Field	Value		Hide	Combe	^
1		R	Т	0,50	0,00	2,40	FILL: SAND, topsoil, silty, w. fe	э	•	+		Group: 1	Master Keys				
2	2	R	Т	1,00	0,00	1,90	FILL: SAND, fine, sorted, w. fe	я				Group: 2	Kev		_		
3	}	R	T	1,50	0,00	1,40	FILL: SAND, fine - medium, so	el 🔳		<u> </u>	CAN	Consta	F				
4		B	Т	2,00	0,00	0,90	FILL: SAND, fine, well sorted,	li		3	SAM	Sample	D state				
<u>۲</u>		R	1	2,50	0,00	0,40	FILL: SAND, fine, well sorted,	li		÷.		Group: TU					۱.
6	Select					3 · 10	FILL: SAND, fine, well sorted,	li —		4	STYPE	Туре 🧲	R				1
_ <b>Y</b>		Type				-0,50	SAND, fine, light brown, GYTT	<u>-</u>		5	TB	TB	T				1
<b>P</b>			Core Sample			-1,1	CLAY, silty, sandy, sl. gravelly,	4		6	D	Depth	2,50				
_		E	Bemark			1.6 SILI, clayey, Intesandy, sl. laye     2.10 CLAY TILL, sandy, gravelly, ligi     2.60 CLAY TILL, sandy, gravelly, w.     2.11 CLAY TILL, sandy, gravelly, w.		- 7	L	Length	0,00						
_[		G	Glass Sample					8	level	Level	0,40						
<u> </u>	1		Intact Sample					9	CRUN	Core Run			<b>V</b>				
_		L	Lab. Sample			3,10	CLAY TILL, sandy, gravely, gr	ie .		10	RECOV	Recovery			<b>V</b>		
	3	м	Large Remoulded	Sample		3,35	CLAY TILL, very sandy, grave	<u>.</u>		11	CLTOP	Core loss at top o					
-	4	P	SPT Sample			3,00	-3,6U CLAY TILL, sandy, gravely, w.	-		12	DIAM	Diameter			<b>V</b>		
1	6	R	Remoulded Samp	e		-4,10	CLAY TILL, sandy, gravely, w			13	DESCR1	Description	FILL: SAND, fine, well sorted, light grey \$Fi £Re				
1	7	3	Sub Sample			-5,10	CLAY TILL, sandy, gravelly, gr	rε		•		Group: 12	Advanced		<b>V</b>		
[1	8		Find	OK	Cancel	-5_0	0 - 88 cm: ICLAY TILL, (0, 27	s		15	LCOM	Lab. Company			<b>V</b>		
		IC.	T	0.00	1 00	5.90	0_100 are ICLAY THE condu	.		16	APREP	Handling			<b>V</b>		
	20	с С		10.40	1.55	.7.50	0 100 cm: ICLAY TILL, sand			17	ACOM	Lab Company			<b>V</b>		
	20	C C		12.00	1,35	-9.10	OF TOO CIT. (CEAT TILE, sally	£		18	ALOC	Lab Loc.			<b>V</b>		
- 2	216	S	T	12,00	0.32	-9.10	0 - 32 cm: ICLAY TILL sandu	.		19	AREP	Lab Report			<b>V</b>		
2	21B	s	T	12,32	0.34	-9.42	32 - 66 cm: ISAND, fine - med			20	ADATE	Lab Date			<b>V</b>		~
- 2	210	S	Ť	12,66	0.19	-9.76	66 - 85 cm: ICLAY TILL, sand	5	F1:	Cop	y Sample						
2	21D	S	T	12.85	0.50	-9.95	85 - 135 cm: Inot described	~	F2:	Form	nat Geology -	Selected					
<					-,			F3:	Form	nat Geology -	All						
<b>N</b> (	<b>↓</b> 5	of 111	▶ N   * X														

Figure 6. Code lists by use of Selector.

The Code List Selector is useful for managing long code lists and for fast editing.

You produce the extended detail window by Ctrl+Shift+Z and refresh the window appearance by Ctrl+Shift+R.

### **Maximisation**

You can maximise the separate windows so that the tree window and other windows, if required, are hidden by a click on the maximise button:

	$\frown$
Value	Hide Combo 🖄
Master Keys	

Figure 7. Button for maximising window.

#### 2.1.2 Graphs

GeoGIS2005 includes a number of graphs that are used to get a quick survey of the data:

- Time series of water soundings
- Grain Size distributions



Figure 8. Grain Size distributions.

The graphs are defined in the Meta database. You may adjust the graphs by right clicking what you want to change. If you need larger control of the layout, it is easy to copy data to e.g. Excel, where there are more options for adjusting the layout.

In the detail window, the user may turn the individual graphs on and off and indicate the insertion of the axes. By right clicking on the graph and select Toolbar, you get a large number of options for editing the data view:



Figure 9. An example of a graph where the Toolbar is selected. Here the data are shown in a table at the bottom of the image.

#### 2.1.3 Documents

External documents can be viewed in GeoGIS2005.

The documents are expected to be standard formats that can be viewed in a Browser such as html, pdf, jpg, svg, excel, word, etc.

Note, that documents do not have to be fixed files, but can also be dynamic pages that are called by the use of an URL with parameters. In this way GIS references from KMS, GEUS and others can be shown with appropriate coordinates as parameters.

Besides, GeoGIS2005 contains a number of functions for drawing borehole logs, longitudinal sections and miscellaneous geotechnical lab tests.

E.g. borehole logs from the central Jupiter database may be displayed in the form of external documents. A valid URL (external documents) or a path (local documents) identifies the documents.

Other external documents in the Jupiter database can be shown in a similar way.



Figure 10. An example of a borehole log viewed in GeoGIS2005. The viewer can be maximised for optimal view of the external/attached documents.

## 2.2 **Data**

Data viewed in GeoGIS2005 may have several origins. Examples are GeoGIS databases used in connection with GeoGIS2000 and the Jupiter database at GEUS.

#### **Databases**

GeoGIS2005 may access several databases at a time. The databases may be placed locally on the user's machine or network, in a client-server environment or hide behind a web service. The user defines the connection to the different databases in the Database administrator and is subsequently able to call the databases from the menu:



Figure 11. Fast select of attached databases.

#### <u>Pages</u>

Access to a certain kind of database is divided into a number of "pages". The pages are called from the systems main menu:

: 间 🏶 🥥   📬   😲 🌄   Database	Fehmarn •	• P	2age	Borings	•	<u>S</u> hortcuts	Last	-
				Borings - Simple Borings Syntaxes				
				Layer Series Projects VRegister Analyses - Paran Field Codes History	nete	rs		

Figure 12. Selecting database pages.

Several pages belonging to the same or different databases can be viewed at the same time.

#### Shortcuts

: 间 🏶 🥥   📬   😲 🎭   Database	Fehmarn 🔹	<u>P</u> age B	orings •	• <u>S</u> hortcuts	Last
					15311451 - Fehmarn Belt DONG77 - Vibrocores for pipeline in corridor Last Grain Size Distributions

Figure 13. Selecting shortcuts.

If there is a particular item in the menu structure, which is often visited, the user may make a short cut for this item. Typical shortcuts can be:

- A particular borehole
- Newly entered samples

• a special user defined search

"Last" indicates the menu used most recently. The shortcuts may refer to different databases. You can enter a suitable guide text to each shortcut. You can also select a fixed shortcut as "start up page":

i 间 🎕 🥥   🐚   🖓 🌏   Datal	pase Fehmarn	<ul> <li>Page Borings</li> </ul>	<ul> <li>Shortcuts</li> </ul>	Grain Size	Distrit 🝷
Short	cuts				×
	Shortcut	<u>ــــــــــــــــــــــــــــــــــــ</u>	Database	Start	Maximize
	15311451 - Fehmarn Bel	lt	Fehmarn		
	DONG77 - Vibrocores fo	r pipeline in corridor	Fehmarn		
• I	Grain Size Distributions		Fehmarn		
	Last		Fehmarn		

Figure 14. Editing shortcuts.

#### 2.3 GIS – Interface

As standard, GeoGIS2005 has a number of functions for exporting data to desktop GIS systems directly from the windows. This is made possible by showing data together with the relevant coordinates.

🖥 B	BRegister: Feh2007B_UTM32EUREF89; Jobs \ 15311451 - Fehmarn Belt \ Borings																	
Во	Borings																	
	Boring	Des	cription 1	Contr	ractor Geolo	gist Date		Purpose	Method	Pr. C. System	Prim. X		Prim. Y	Quality	Level	Ref. Level	Bottom	^
►	96.0.001			GI	JNG	1996	-03-25	GT	CO	UTM32E89	65316	2,82	6057839	,35	DVR90	2,81	61,2	25
	96.0.002			GI	JNG	1996	-03-30	GT	CO	UTM32E89	64412	0,13	6041022	,67	DVR90	5,31	60,1	10
	96.0.003			GI	JNG	1996	-06-21	GT	CO	UTM32E89	65133	7,70	6051149	,52	DVR90	4,08	76,3	35
	96.0.004			GI	JNG	1996	-06-07	GT	CO	UTM32E89	64970	3.59	6048060	.69	DVR90	3.98	92.8	35 🞽
<u> </u>																		2
	[4 4   1 of 89   ▶ ▶]   ★ X																	
Samp	ples Layers	Grain Siz	e Distributio	ons Proctor	Stand Pipes	Borehole l	.ogging	Soil An	alyses G	as Samples Gro	uting Inject	ions	Docume	nts				
Sa	mples																	
-	impres																	
	Sample	Туре	TB	Depth	Length	Level	Descr	iption					Seq.	Field	Value		Hide	e 🔷
►	1	R	T	0,50	0,00	2,31	FILL: 9	SAND, top	osoil, silty, i	w. few gravel, dar	rk brown		25	dc				
	2	R	Т	1,00	0,00	1,81	FILL: 9	SAND, fin	e, sorted, v	w. few rounded gr	ravel, w.			Basep. 80	Sunta		<b>_</b>	
	3	R	T	1,50	0,00	1,31	FILL: 9	SAND, fin	e - medium	i, sorted, gravelly,			27	Syntax	A			
	4	R	T	2,00	0,00	0,81	FILL: 9	SAND, fin	e, well sort	ed, light grey \$Fi i	٤Re	1		Group: 90	Geo R	eference		
	5	R	T	2,50	0,00	0,31	FILL: S	SAND, fin	e, well sort	ed, light grey \$Fi i	٤Re	-		D. C. Custern	LITM2	25.00		A II
	6	R	T	3,00	0,00	-0,19	FILL: 9	SAND, fin	e, well sort	ed, light grey \$Fi i	٤Fe	-	28	Dia V	CE210	2003		<b>- 1</b>
	7	R	T	3,50	0,00	-0,69	SAND	, fine, ligh	t brown, G	YTTJA, finesandy	y, clayey,	-	29		60570	2,02		-11
	8	R	T	4,00	0,00	-1,19	CLAY;	silty, san	dy, sl. grav	elly, w. decayed r	repts,	-	30	Pillit I	2 01	33,33		- 1
	9	R	T	4,50	0,00	-1,69	SILT,	clayey, fin	esandy, sl	layered, w. some	•	-	31	ner. Lever	2,01	250.50		
	10	R	Т	5,00	0,00	-2,19	CLAY	TILL, san	dy, gravelį	y, light greenish g	re <mark>,</mark> light	-	32	Sec. C. System	CE004	4.00		-/
	11	R	T	5,50	0,00	-2,69	CLAY.	TILL, san	dy, gravell	y, w. iron oxide st	ain, <sup>si</sup> ght	-	33	Sec. X	00324	4,00		
	12	R	Т	6,00	0,00	-3,19	CLAY	TILL, san	dy, gravelį	y, greyish brown \$	\$GI £Gc		34	Sec. T	60000	43,00		/ -
	13	1	В	6,25	0,25	-3,44	CLAY	TILL, very	y sandy, gr	avelly, w. sand st	reaks,		35	Az				
	14	R	T	6,50	0,00	-3,69	CLAY	TILL, san	dy, gravell	y, w. iron oxide st	ain, light		+	Group: 100	nevisi	on		
	15	B	Т	7,00	0,00	-4,19	CLAY	TILL, san	dy, gravell	y, w. iron oxide, lig	ght stain,			Sample			_	
	16	R	Т	7,50	0,00	-4,69	CLAY	TILL, san	dy, gravelį	y, w. few sand str	eaks,		-1: Copy	Sample	Coloria		_	
	17	R	T	8,00	0,00	-5,19	CLAY	TILL, san	dy, gravelį	y, grey \$GI £Gc			-2: Forn	at Geology	- Selected		_	
	18	r -	Т	8.00	0.88	-519	0 - 88	cm: ICLA	0 1117 0	27 softened) sar	odu veru		-3: Forn	iat Geology	- All		-	
N	4 1	of 11	1   🕨 🕨	* X													_	

Figure 15. Here geological data are grouped together with coordinates from the borehole, so data easily can be exported to GIS.

The GIS export functions are called from the shortcut menu:

GIS 🔸	GIS start	Ctrl+G
	GIS export	Ctrl+Shift+G
	GIS export selected	Ctrl+I
	GIS center selected	Ctrl+Shift+I

Figure 16. Direct GIS Export functions.

GIS Export functions:

- GIS start Starts the selected GIS system. As most GIS systems have a long start-up procedure, it is more convenient to start the GIS system before you send data from GeoGIS2005.
- GIS export All table columns are exported.
- GIS export selected All selected table columns are exported.
- GIS center selected The current GIS window, which has focus is centred on the coordinates in the selected rows. Markers circles are drawn, but data are not exported.

The following GIS systems / GIS formats are supported:

- ArcGIS 9.1 or later
- MapInfo 8.0 or later
- Google Earth 4.2 or later
- GISViewer
- Shape files

The easiest way to select the present GIS system is by clicking the button in the system's status bar:



Figure 17. GIS button in the status bar.

When you have exported data to GIS, you can use smaller applications in the GIS systems for:

- looking up references in GeoGIS2005
- selecting e.g. borings
- defining longitudinal sections



Figure 18. GeoGIS2005 toolbar in MapInfo.

You can also export data to GIS by way of the GIS module, which is used when exporting larger amounts of data, see section 3.

# 3. Utilities

GeoGIS2005 contains a number of standard tools that are used across the different database types:

🌀 Database Administr	ator	
Open Create Repair L	License	
Database Name:	Feh2007B_UTM32EUREF89	
Database Type:	Microsoft Access	
Database Connect:	C:\GeoData\Fehmarn\Db\Feh2007B_UTM32EUREF89.mdb	
Database Format:	GeoGIS	
Database Page:	Borings 🍘 Import, Export and Update	
Database Username:	Adm Application: Geoform - Import	
Database Password:	Geoform - Import	
Before GeoGIS2005 can I	be used th	
Enter database name, typ	e, filename	🚳 GIS Export
- Database Name: Short n - Database Type: Enter M	name chos S Access	Application: Barings - All
- Database Connect: Ente - Database Format: Enter	er filename GeoGIS, F List Status Parameters	This GIS export produces a map layer containing all borings in the current database
		List Status Parameters Borings - All Borings - By Job Borings - By Job Borings - By Section Borings - By Section Boring - By Section Borings - By S

Figure 19. Various standard tools in GeoGIS2005

#### The Database Administrator is used for:

- defining database access including user name and password specification
- creating new local databases
- updating and repairing (local) database
- handling licenses

#### Import, Export and Updating is used for:

• importing and exporting data between databases and various file formats

- performing database check programs, e.g. to control that field codes are entered correctly
- performing database updating scripts

The **GIS module** is used for running large GIS export processes. The export processes can be executed in groups. The data may be exported to:

- ArcGIS 9.1 or later
- MapInfo 8.0 or later
- Google Earth 4.2 or later
- GISViewer
- Shape files

## 3.1 Database Administrator

	_		
<u> </u>		э.	
×			

🏽 Database Administr	ator	×			
Open Create Repair L	icense				
Database Name:	Feh2007B_UTM32EUREF89				
Database Type:	Microsoft Access				
Database Connect:	C:\GeoData\Fehmam\Db\Feh2007B_UTM32EUREF89 🔽 🛄	)			
Database Format:	GeoGIS				
Database Page:	Borings				
Database Username:	Adm				
Database Password:					
Before GeoGIS2005 can be used the user must attach the system to one or more databases. Enter database name, type, filename/connect string, format and default page: • Database Name: Short name chosen by the user • Database Type: Enter MS Access / SQL Server / Web Service • Database Tornect: Enter filename / Connect string / Url • Database Format: Enter GeoGIS, PCJupiter, RMS • Database Page: Enter the default database page					
	New Add Delete List Open Exit	)			

Figure 20. Database Administrator

The Database Administrator is used for:

- defining access to databases including user name and password specification.
- creating new (local) databases
- updating and repairing (local) databases
- handling license conditions

#### 3.1.1 Open database – tab

- Database Name Here the user can enter a short name for the database connection. The name is used hereafter when the user wants to see the data.
   Database Type Here the user enters the database type. The following data-

base formats are supported:

- Microsoft Access
- SQL Server
- Oracle
- Webservice
- Webservice GEUS
- Database Connect Here the connect parameters to the database are entered. The parameters are dependent on the database type. See below.
   Database Format Here you enter the database format. Example formats are:
  - GeoGIS
  - JupiterXL
  - Default database page for this database.
  - Database User name User name for this database. If empty, the Windows user is used.
- Database Password Password for this database.

Database Page

The connection to the database is defined once for all and saved - even if the program closes down.

The user can save the settings by using *GeoGIS2005 > Files > Save settings* and send it to another user, who can import it by using *GeoGIS2005 > Files > Import*.

If you want to connect to Microsoft Access, you click for selection of Microsoft Access database file (.mdb)

If you want to connect to SQLServer or Oracle you click for entering database connect properties:

🖲 Data Link Properties 🛛 🛛 🔀	🖲 Data Link Properties 🛛 🔀
Provider Connection Advanced All	Provider Connection Advanced All
Select the data you want to connect to: OLE DB Provider(s) Microsoft Jet 4.0 OLE DB Provider Microsoft OLE DB Provider For Data Mining Services Microsoft OLE DB Provider for DTS Packages Microsoft OLE DB Provider for Indexing Service Microsoft OLE DB Provider for ODBC Drivers Microsoft OLE DB Provider for OLAP Services Microsoft OLE DB Provider for OLAP Services 8.0 Microsoft OLE DB Provider for OLAP Services 8.0	Specify the following to connect to SQL Server data: 1. Select or enter a server name: Z09302 Refresh 2. Enter information to log on to the server: Use Windows NT Integrated security User pame: Password: Blank password Allow saving password
Microsoft OLE DB Provider for SQL Server         Microsoft OLE DB Simple Provider         MSDataShape         OLE DB Provider for Microsoft Directory Services         SQL Native Client         SQL Server Replication OLE DB Provider for DTS         VSEE Versioning Enlistment Manager Proxy Data Source         Next >>	3. Select the database on the server:
OK Cancel Help	OK Cancel Help

1. Select OLE DB Provider

2. Select Server and Database

Figure 21. Indicating parameters for connecting to SQL Server and Oracle databases.

It is recommended that you use *Windows NT integrated security*, so the security is managed via the Windows user. By this method, the user can avoid entering user name and password in GeoGIS2005.

If you want a connection via a web service, you enter the Internet address on the server and select the database:

Database Connect:	http://geot	est.rai	mboll.dk/service.asmx					
Database Format:	GeoGIS	Data	atabase Liste					
Database Side:	Boredata		Database	Beskrivelse				
Database Brugernavn:		▶_	Fehmarn Jupiter					
Database Password:		_						
Før GeoViewer kan bru	ges må bruge	<		Ш		>		

Figure 22. Selection of database in connection with web service.

Connection to Jupiter at GEUS is done via a web service with the Internet address: www.jupiter.geus.dk.

## 3.1.2 Create databases - Tab

🎆 Database Adminis	trator		×
Open Create Repair	License		
Database Connect:	C:\GeoData\Fehmarn\Db\Feh2007.mdb 🛛 🗸		
Database Format:	GeoGIS 💌		
A new MS Access datab database format.	ase may be created here. Enter filename and	Opret DB	כ
A SQL Server database database format.	definition file may be created here. Enter	SQL Server Definition	
Query Database:	C:\GeoServer2005\Db\qVej.mdb		
A MS Access Query Dat created here. Select the query database and the	abase containing the users own queries may be referenced database, enter the filename of the database format.	Query DB	]

Figure 23. Database Administrator functions for creating new databases.

Here the user may:

- Create new Microsoft Access databases. Enter file name and database format for the new database.
- Print out a database definition file to use in SQL Server 2000 and SQL Server 2005. This file contains all necessary SQL expressions to create a SQL Server database e.g. by using SQL Server Enterprise Manager.

• Create a new Query database. Enter the database you want to connect to together with the file name of the Query database.

A Query database is a Microsoft Access database with tables linked to the master database. The Query database enables the user to query SQL Server and Oracle databases using Microsoft Access queries. The active Query database is the one selected in the list. The user may

start access the database by pressing the icon: 🥨 in the toolbar.

#### 3.1.3 Repair databases - Tab

🌃 Database Administrator	×
Open Create Repair License	
Database Name: Feh2007B_UTM32EUREF89	Repair
Check the database for updates and display a list of updates.	Check
Update the database corresponding to the list of updates.	Update Updates in SQL File
Clear user settings from system databases. This function is used when preparing a new installation.	Clear Settings

Figure 24. Database Administrator functions for repairing databases.

The user may:

- Repair Microsoft Access databases if the internal structure is damaged.
- Check a database for new tables, fields and relations.
- Update a database with new tables, fields and relations.
- Prepare a new installation.

When a user receives a new version of GeoGIS2005, new tables, fields and relations may have been added. The Check and Update functions make it possible to update existing databases corresponding to the new database formats by first listing the necessary updates and then by adding them to the selected database.

For SQL Server databases, it is possible to get the necessary update scripts printed out to a file, which afterwards may be executed in the database environment.

#### 3.1.4 Licenses - Tab

🖗 Database Administrator 🛛 🔀										
Open	Crea	ate Repair Lice	nse							
Insta	II No.:	1864544								
Comp	oany:	Rambøll								
User	Name:	BRS2								
Mail:		brs@rambo	ıll.dk							
	Seq.	Page	License Wanted ?	LicenseNo	Start Date	End Date	License	Version	Remark	ור
$\mathbf{F}$	40	JupiterXL	<ul> <li>Image: A start of the start of</li></ul>	119521271741452	2007-02-01	2008-02-01		1.1.68		
	101	BRegister		168721272233782	2007-02-01	2008-02-01	<ul> <li>Image: A start of the start of</li></ul>	1.1.68		
	200	VRegister		147321272019939	2007-02-01	2008-02-01	~	1.1.68		
	211	Database Check		0						
	500	GeoServer		0	1900-01-01	1900-02-01		1.1.68		
	800	Status		0						
	800	RMS		136221271908969	2007-02-01	2008-02-01	<b>~</b>	1.1.68		
*						<u>)</u>				
GeoGIS2005 requires valid license numbers to run proberly.     Use the 'Mail' button to get license No's using mail or     Use the 'Get' button to get license No's using a web service (fastest)     Use the 'Update' button to save new license info     Use the 'Get Updates' button to check for new versions of the programme      Mail for License No's     Get License No's										
Ma	all for Li	cense No's	Get License No		e License No's		t Updates			

Figure 25. Database Administrator functions for maintaining license numbers.

When GeoGIS2005 is installed on a PC and executed for the first time, it is supplied with an installation number. The user must get corresponding license numbers for the various modules before the program can run.

After entering Company Name, User Name and Mail Address and ticking off the required program modules, the user may retrieve the license numbers using the internet by clicking "*Get License No's*".

The first time the user retrieves license numbers, the possibility of using the program 1 month free of charge is offered. When the user enters into a final license agreement, Rambøll will update the license numbers, which the user can import again by clicking "*Get License No's*". Under special circumstances, users may get license numbers sent by mail. The users enter the new license numbers themselves and finish by "*Update License No's*".

The running version is checked by a click on "*Get Updates*". If a new version is available, the page http://GeoGIS2005.ramboll.dk will start. From here, new updates can be downloaded.

Each time the user starts the system and is connected to the internet, it will automatically check for new versions. If the version is outdated, the following button will show in the system's status bar:



A click on the "Update!" button gives access to the update page.

## 3.2 Import, Export and Update

<u>6</u>

	port and opdate	
Application:	Geoform - Import	<b>~</b>
Geoform - Import		
List Status	Parameters	
<ul> <li>1 Databa</li> <li>2 Databa</li> <li>3 Databa</li> <li>4 Databa</li> <li>5 Databa</li> <li>6 Analyse</li> <li>7 Web -1</li> <li>8 Import</li> <li>9 Standa</li> <li>10 Geofo</li> <li>01 Geofo</li> <li>02 G</li> <li>03 G</li> <li>04 G</li> <li>11 GeoX</li> </ul>	se Definition se Check se Updates se Import se Export ss mports of external databases t t m eoform - Import eoform - Export - By Job eoform - Export - By Job eoform - Export - By Selec ML	g tion
	Database Type	Database Name
		C// Coop at a / Ealer are / CD// CEOMODEL / Loop
From Database:	File 🗸	

Figure 26. The Import module.

Import, Export and Update is used for:

- importing and exporting data between databases and various file formats
- executing database check programs, e.g. for checking that field codes are correctly specified
- executing database updating scripts

The user may specify:

- From Database, i.e. the database or file from which data are imported
- To Database, i.e. the database or file to which data are exported
- The **Parameters** tab is used to specify certain parameters in connection with the individual function
- The Status tab shows continuously how much the individual function has calculated

You start the program by clicking the **Execute** button and stop it by clicking the **Stop** button in the Status bar:

Stop DK MAPINFO BRS Hist Af .....

#### 3.2.1 Geoform and GeoXML

**Import, Export and Update** has a special function to read and write Geoform / GeoXML files used for exchange of especially geological and geotechnical information:

Geoform Files

Figure 27. Example of a Geoform file.

The Geoform files list the data in tables and in rows. The data fields are identified by their sequence in the tables.

#### GeoXML Files

xml version="1.0" encoding="iso-8859-1"?
<geoxml date="20061105" version="1.0.0"></geoxml>
<com active="False" address="Møntergade, (R&amp;H kortnummer 1239)," com="DSB" name="DSB" sym="1"></com>
<job <="" com="DSB" csys1="UTM32ED50" descr3="a" dstart="19951004 120000" job="012/90" td="" title="Nyt op1æggerleje, Rødbyhavn"></job>
DCOMPL="19951004 120000" SYNTAX="B" SETUP="UK" RINI="dev" REV="20040329 111034" MSLINK="6" lck="True" />
<pre><bor <="" bdate="19900502 120000" bor="B501" bsyno="12/90-B501" com="DSB" csys1="UTM32ED50" job="012/90" lsys="DNN" pre="" x1="651866" y1="6058851"></bor></pre>
Z1=*2.74" TOP="0" BOTTOM="17.6" PURPOSE="GT" mthd="UK" PHASE="0" RINI="dev" REV="20040329 051729" MSLINK="126" />
<lay bor="B501" com="DSB" d1="0" d2="7.25" interp="TC" job="012/90" layer="LG/PG" mslink="482" series="A"></lay>
<lay bor="B501" com="DSB" d1="0" interp="M" job="012/90" mslink="481"></lay>
<lay bor="B501" com="DSB" d1="0.6" interp="M" job="012/90" mslink="483"></lay>
<lay bor="B501" com="DSB" d1="1.2" interp="M" job="012/90" mslink="484"></lay>
<lay bor="B501" com="DSB" d1="2.3" interp="M" job="012/90" mslink="485"></lay>
<lay bor="B501" com="DSB" d1="4.4" interp="M" job="012/90" mslink="486"></lay>
<lay bor="B501" com="DSB" d1="6.3" interp="M" job="012/90" mslink="487"></lay>
<lay bor="B501" com="DSB" d1="7.25" interp="TC" job="012/90" layer="GC" mslink="408" series="A"></lay>
<sam <="" bor="B501" cltop="False" com="DSB" d="0.5" descr1="FILL: SAND, sl. clayey, gravelly, w. mull" job="012/90" sam="2967" stype="R" tb="T" td=""></sam>
D1="0" D2="0.6" />
<sam <="" bor="B501" com="DSB" d="1" descr1="FILL: SAND, medium, sl. gravelly, w. gyttja lumps" job="012/90" sam="2968" stype="R" tb="T" td=""></sam>
CLTOP="False" D1="0.6" D2="1.2" />

Figure 28. Example of a GeoXML file.

GeoXML meet the same demands as Geoform files, but are based on a simple XML format. The advantage of using GeoXML is that the database fields are specified explicitly. This is more safe than using the field sequence as in the Geoform files.

#### 3.2.2 Definitions

The different functions in **Import**, **Export and Update** are defined in the Import definition database. It can be called from the system menu:

🗄 📑 🎯 🏈   🐑   🖓 🎭   Database	System	• Page	System	<ul> <li>Shortcuts</li> </ul>	15311451 - Fehr	-
			System			
			Imports Standat			
			GIS			
			Plot Setup			
			CAD			
			Selections			
			Query wizards			

Figure 29. Calling the Import definition database.

In the definition database, the user may e.g. edit the different SQL expressions:

5 Database Imports ; Imports \ 12 - Geoform												
Folders	12 - Geoform											
Imports     Or Database Definition     Database Check     Or Database Check     Database Check     Or Database Inport     Or Database Inport     Or Database Report	Group Name  Caroup Name  Caroup Name  Caroup Name  Applications Import Group	I Descriptions	Descr									
🛅 5 - Analyser 🛅 7 - Web - Indberetning	Applications	Gra	Denn	See	Field	Value		Lide				
- 🔂 8 - Konvertering af eksterne databaser - 🔂 9 - Forskelligt - 🤂 10 - Standat		Import Geoform Export - By Job Geoform	Geoform - Import Geoform - Export - B	+	Group: 1 Group: 2	Master Keys Key						
Constant Sectors     Constant Sectors     Constant Sectors     Constant Sectors	* 3,00 Geoform - 1	Export - By Boring Geoform Export - By Geoform	Geoform - Export - B Geoform - Export - B	1	Seq Appl Group: 10	1,00 Geoform - Import			1			
Geoform - Export - By Job Geoform - Export - By Boring Geoform - Export - By Selection				3	Descr Grp	Geoform - Import Geoform						
Import Group Descriptions     Control 13 - GeoXML				5 6 7	DBNameFrom DBNameTo DBTypeFrom	C:\GeoData\Fehmarn\CD\GEOM Feh2007A File						
				8 9 10	DBTypeTo MandatoryFrom MandatoryTo	Microsoft Access						
- 🔂 17 - Formatering af geologi - 🛅 18 - Bottom				11 12	ExtensionFrom ExtensionTo	101						
19 - Import al geolysiske data     21 - Transformation af koordinater     21 - Transformation ar koordinater	<		Σ	13	Active				~			

Figure 30. The Import definition database.

#### 3.3 **GIS Export**



🌃 GIS Export	
Application:	orings - Al
This GIS export proc	luces a map layer containing all borings in the current database
List Status Pa	arameters
<ul> <li>Borings</li> <li>Borings - A</li> <li>Borings - B</li> <li>Brings - B</li> <li>B</li> <li>Brings - B</li> <li>Brings - B</li> <l< td=""><td><mark>II</mark> Iy Job Iy Selection Iy Section</td></l<></ul>	<mark>II</mark> Iy Job Iy Selection Iy Section
	Database Type Database Name
From Database:	Microsoft Access 🗸 Fehmarn 🗸
GIS File:	MapInfo 🔽 🗌
Coordinate System:	UTM32E89
	Def. Log Execute Exit

Figure 31. GIS Export.

The **GIS module** is used for running large GIS export jobs. The export jobs may be executed in groups. The exported data may be imported to:

- ArcGIS 9.1 or later
- MapInfo 8.0 or later
- Google Earth 4.2 or later
- GISViewer
- Shape files

The user must specify:

- From Database, i.e. the database or file from which data are imported
- GIS File, i.e. the path to the files to which data are exported
- Coordinate system
- The **Parameters** tab is used to specify special parameters in connection with the individual function
- The Status tab shows continuously how much the individual function has calculated

You start the program by clicking the **Execute** button and stop it by clicking the **Stop** button in the Status bar:

				<u> </u>	~
Stop	DK	MAPINFO	BRS	Hist Af	1:

If you select export to MapInfo or ArcGIS the files will open in a new map window. All layers will be in the same window. If you select export to shapefiles you can open the file separately in e.g. ArcGIS.

Note that you can also export to GIS directly from data grids using the shortcut menu.

#### 3.3.1 Definitions

The different functions in the **GIS module** are defined in the GIS definition database, which can be called from the systems menu:

: 间 🎯 🥥   🐑   😲 🌄   Database	System -	Page	Imports	- Shortcuts	Last	•
			System			
			Imports			
			Standat			
			GIS			
			Plot Setup			
			CAD			
			Selections			
			Query Wizards		J	

Figure 32. Calling the GIS definition database.

#### 3.4 Search

## 3.4.1 Standard search function

Standard search based on a data grid window is quickly made by using the standard search function:

Y

s	earc	h								×		
	Sea	rch Da	tabase Feh2007B	UTM32EUR	EF8	9	🗸 Retu	ırn:	500 💊	•		
	Search Table: Borings											
ſ	Giid											
ľ		Seq.	Field	Order		Value 1	Value 2	Value 3	Value 4			
	F	1	Company	Ascending	•	DGI	DSB					
		2	Job No.	Ascending	•	15311451	012/90			- =		
		3	Boring	Ascending	•							
		4	Synonym		•							
		5	No. 1		•							
		6	No. 2		•							
		7	No. 3		•							
		8	MSLink		•							
		9	Update Key		•							
		10	Description 1		•							
		11	Description 2		•							
		12	Description 3		•					~		
	<		Ш						>			
	0	lear					<u>S</u> ea	arch	<u>C</u> anc	el		

Figure 33. The standard search function that can be called from all windows. Grey fields are calculated fields.

The user may enter up to 10 alternative criteria's. The **Return** field is used to limit the number of result rows. Normally you should not look up more than about 10000 rows. This limitation is especially important in connection with the use of webservices.

The SQL tab contains the criteria in SQL form:



Figure 34. The standard search function – SQL window

## 3.5 **Plotting Drawings**

🖁 BI	Register: Feh	2007B_UTM32E	UREF89; Jobs											E		×
Borin	Boring Sections Documents															
Bo	Borings															
	Boring	Description 1	Date	Purpose M	ethod   Pr. C. System	m Prim.≻	<	Prim. Y	^		Seq.	Field	Value	1 1	Hide	^
	96.0.001		1996-03-25	GT CC	UTM32E89	65316	62,82	6057839,35			22	Rig			~	
	96.0.002		1996-03-30	GT CC	UTM32E89	64412	20,13	6041022,67	=		23	Water Sounding ?			~	
	96.0.003		1996-06-21	GT CC	UTM32E89	65133	37,70	6051149,52			24	State			~	
	96.0.004	- 1. 97	1996-06-07	nn Ta	LITM32E89	64970	18,59	6048060,69			•	Group: 50	Primary			
	96.0.006	🚳 Orde	r drawing				,77	6054681,40		-	25	Pr. C. Sustem	UTM32E89			
Þ	96.0.007	List F	Parameters Order	8			,76	6052842,51		-	26	Prim X	649044,76		T	
	96.0.009			* * + - ( D Cl	1 (D/2)		,48	6045814,03			27	Prim, Y	6052842,51			
	96.1.003A	Pen	016 PSIRUK-R 017 PEGDK.Ge	astor Profil nr. Stech, Profile I		-	.60	6051144,02			28	Quality				
	96.1.004	Pen	030 PSTGUK-G	eotech. Profile	No. 4 - (UK)		.49	6048057,89			+	Group: 51	Secondary			
	96.1.005B	Pen	032 PSTGD - Ge	otech. Profile I	No. 5 (Tysk)		,59	6046032,68		-		0	Coordinates			
	96.1.006B	Pen	065 PGSS - Geot	ech. Profile N	o. 8 - (S)		,97	6054684,50			+	Group: 52	Coordinates			
	96.1.007A	Pen	066 PGSDK - Ge	otech. Profile I	No. 5 - (DK)		.46	6052838,11				Group: 53	Level			
	96.1.008B	Pen	US7 PGSD-Geol	ech. Prohle N	0.7-[D] 2. (UK Leng)		.63	6048819,44			36	Level System	DVR90			
	96.1.009	Pen	202 PVCLUK VI 204 PVCKLIK VI	brocoring No.	2 · (UK · Long) 1 · (UK · Short)		.68	6045817,03			37	Bef Level	4.26			~
	96.1.021A	Pen	301 PCOLDK - C	ore Profile No.	1 - (DK - Long)		.98	6050572,01		F1:	Viev	v Boring				
	96.1.022A	Pen	302 PCOKDK - C	ore Profile No.	2 - (DK - Short)		.88	6047761,07		F2:	Defa	ult Drawing				
	96.1.023	Pen	303 PCOKPS - C	ore Profile No.	4 - (S)		.67	6054518,10		F3:	Сор	y Boring				
	96.1.024	Pen	304 PCOLUK C	ore Profile No.	5 · (UK · Long)	~	,21	6048504,13		F4:	Bott	om of Boring				
	96.1.025	Pen	SUS PLUKUK-I	ore Profile INO	5 - ILIK - Shorti	>	.55	6047069,87	~	F5:	Viev	v Document				
<	00.1.000						00	0000047	-	F6:	Save	e Selection				
	4.1.2	Horz. Sc	ale:		×	Print?		1.44								
	4 6	Of 89	ale: 1.50													
			1.50													
		More	Order	Order Select	ed Clear	Execute										

Figure 35. Plotting borehole logs.

The user may plot drawings of borehole logs, longitudinal sections, laboratory enclosures etc. by calling the drawing function. Here you can select the required drawing type and order one or more drawings:

- More is used to change the set up of the individual drawing.
- **Order** is used to order a single drawing for plotting double click in the list for fast plotting of a single drawing.
- Order Selection is used to order drawings of e.g. a number of selected boreholes.
- Clear is used to delete earlier orders.
- **Execute** is used to create the ordered drawings.
- Exit closes the window.

The plotting scales (**Horz. Scala** and **Vert. Scala**) may be changed for each drawing type and saved to the next time the window is used. **Print?** is used to indicate whether the drawing should be sent to the printer immediately.

The user may enter special parameters in the **Parameters** tab and see the ordered drawings on the list in the **Order** tab.

The user may select *Standard Drawings* by using the shortcut menu in the drawing list. The standard drawing is highlighted with blue:



Figure 40. Selection of Standard Drawing.

Standard Drawing may be used for fast plotting in the relevant windows:

UTM32E89	648188,59	~~~~~		37	Ref. Level	4,26		
UTM32E89	653192,97	~~~~~		38	Тор	24,30		
UTM32E89	649047,46	~~~~~		39	Bottom	90,95		
UTM32E89	646953,63	~~~~~		40	Local Level	4,35		
UTM32E89	645366,68	~~~~		41	Quality		🔽	$\mathbf{v}$
UTM32E89	652396,98		F1.,	v	Doring			
UTM32E89	650912,88		F2:	Defa	ult Drawing			
UTM32E89	654020,67		гэ:	Copy	y Boring			
UTM32E89	650856,21		F4:	Bott	om of Boring			
UTM32E89	649196,55		F5:	View	v Document			
UTMODEOD	050040.00		F6:	Save	Selection			
	<u> </u>							

Figure 41. Button for execution of *Standard Drawing*.

The user may select existing drawings from the drawing list in the tool bar:



The drawings are shown as standard in the built-in drawing program:



Figure 42. Example of a borehole log.

The user may manipulate the drawings by use of the corresponding toolbars and shortcut menus:

Drawing Toolbar

🗄 🚰 🛬 🔍 🌉 🔍 🖑 | 🖸 🖸 🔍 📓 🕍 💁 🖓 Drawing: 🛛 PSTMDK#DGI-10057 💌

#### Drawing Shortcut Menu

Tree View	Ctrl+Shift+T
First Page	
Next Page	
Previous Page	
Last Page	
Zoom In	Ctrl+Shift+I
Zoom Area	
Zoom Out	Ctrl+Shift+O
Pan	
Fit	Ctrl+Shift+F
Fit to Width	Ctrl+Shift+W
Fit to Height	Ctrl+Shift+H
Info	
Refresh from File	
Refresh from Database	Ctrl+Shift+R
Сору	
All Black ?	
Print Preview	
Print	Ctrl+Shift+P
Dxf	
Windows Metafile (EMF)	
Bitmap (PNG)	
Edit Setup	Ctrl+Shift+S
Edit Defs	
Edit File	Ctrl+Shift+E
Clear List	
Clear Cashe	
Browser	

Open drawing file This function allows you to select an existing drawing file. Shift tree window This function turns the view of the tree window on 1 and off. First page These functions are used for navigating between the Next page different pages. Previous page Last page Zoom In This function is used for zooming in on the drawing  $\odot$ by clicking a new centre.  $\odot$ Zoom Area This function is used for zooming in on the drawing by selecting a new drawing section.  $\Theta$ Zoom Out This function is used for zooming out in the drawing by clicking a new centre. smy Pan drawing This function is used to move the current drawing section. Click and drag. Adjust This function adjusts the scale so the entire drawing 0 is visible inside the drawing window in question.



This function adjusts the scale in such way, that the entire width of the drawing is shown within the drawing window in question.

This function adjusts the scale so the entire height of the drawing is visible inside the drawing window in question.

The info function gives information about the individual drawing items, when you run the mouse over them:



A click on the drawing items causes a jump to the relevant input windows.

	Refresh drawing from file	This function redraws the drawing from the drawing file without creating a new drawing from the data- base again.
¢	Refresh drawing from database	This function causes an update of the drawing from the database. This is useful if the user has made corrections to the corresponding data.
	Сору	This function copies the drawing to the clipboard.
	Black and white?	If this parameter is turned on, the drawing will be optimised to black and white printing.
4	Print preview	Show a preview of the print in the window.
	Print	Send the preview of the print to a printer.
	Dxf	This function causes the drawing to be printed as a Dxf file, which can be imported to various CAD systems e.g. AutoCAD.
	Windows Metafile	This function is used to print the drawing in Windows Metafile format, which can be read by many drawing tools.
	Bitmap (PNG)	This function is used to print out the drawing in PNG format.
	Edit Setup	This function causes a call of the database that de- scribes layout and database extract for the drawing.
	Edit Defs	This function makes it possible to edit the symbol definition files connected to the drawing.

Edit drawing file	This function makes it possible to text edit of the drawing file.
Clear drawing list	This function deletes the system's list of old draw- ings.
Clear buffer	This function deletes imported drawing settings from the memory so it is possible to import the updated settings again.
Browser	Drawings are printed in SVG format, which can be viewed in various browsers. The present version of the file format requires that Adobe's SVG plugin is used. This plugin can be downloaded from http://www.adobe.com/svg/viewer/install/main.html.

#### Tree window

The tree window in the drawing tool can be used for navigating between the pages and for indicating whether the different drawing items should be visible or not:



Figure 43. The drawing program's tree window.

- Pages contain the possibility for selecting the active page.
- **SVG** contains the drawing in a hierarchical structure.
- Defs indicates the standard symbols.
- Frame describes the drawing frame.
- Static Content describes drawing items that recurs from page to page.
- Page Annotation indicates page numbering etc.
- Scaled Content contains scaled drawing items for example data that varies with the depth in connection with drilling profiles.

#### Adjustment of logo



Figure 44. Logo Example.

Logos on drawings are most easily given as bitmap files in e.g. png format. The files are placed as standard in the folder: ...\Images under GeoGIS2005 in the main folder.

In the background table definition files the placing and scaling of the bitmap files are given as in the following piece of the file ...Lib\hstgdk.svg:

```
.
<text x="109.0" y ="-12.0">Dato :</text>
<text x="145.0" y ="-12.0">Bilag :</text>
</g>
<image x="2" y="-9" width="40" height="8" xlink:href="../images/logo.png">
</image>
</g>
.
```

## Adjustment of drawings

The different drawings are defined in the database: ...\Access\G05Draw.mdb. The user can edit the different settings by calling the page:



Figure 45. Call of page for setting of drawings.

🖥 Plot Setup; Plot Setup													
Folders	Plot	Setup	2										
	F	Set	Title		Descr		Туре	Tables	PS	ets Seq	MArea DMd	de Print	н 🗠
- 🛅 LSTDKLA3 - Section (DK - Low - A3 - Auto Sca	P	COKI2		1	Core Profile No. 7 - Layers - (Ir	ndia - Short)	LOG	G GTTAB		307	7 3		-
🛅 LSTUKL - Section (UK - Low - Manual Scale)	P	COKPS			Core Profile No. 4 - (S)		LOG	GTTAB		303	3 3		
- Carlor - LSTUKL2 - Section (UK - Low - Manual Scale -	P	СОКИК			Core Profile No. 5 - (UK - Shor	rt)	LOG	G GTTAB		305	5 3		
LSTUKLA3 - Section (UK - Low - A3 - Auto Sca	P	COLDK			Core Profile No. 1 - (DK - Long	3)	LOG	GTTAB		301	3	<b>1</b>	
	► P	COLUK			Core Profile No. 5 - (UK - Long	a)	LOG	GTTAB		304	1 3		
PBHLUK - Borehole Logging Profile No. 1 - (UK	P	DSBGDK			Geotech. Profile No. 9 - (DK)		LOG	GTTAB	2	72	2 1		
PCOKDK - Core Profile No. 2 - (DK - Short)	P	DSBMDK			Environ. Profile No. 3 · (DK)		LOG	G GTTAB		71	1	1	
PCOKI - Core Profile No. 6 - Samples - (India - S	P	FGDK			Geotech. Profile No. 10 (DK)		LOG	G GTTAB		17	7 1		
PCOKI2 - Core Profile No. 7 - Lavers - IIndia - S	<	GEODK			Geological Profile No. 1 - (DK)	r	106	S IGTTAR		-	E 14		× ×
POUKUS - Lote Profile No. 5 - (JK - Short)     POUKUK - Core Profile No. 5 - (JK - Short)     POULUK - Core Profile No. 1 - (DK - Long)     POULUK - Core Profile No. 5 - (JK - Long)	Frame	Header	of 74 Footer	Areas C	urves Symbols Texts B	orehole Log:	s Secti	ons Tables I	Descripti	on Standard Sj	vmbols Styles		
PDSBGDK - Geotech. Profile No. 9 - (DK)		PSat	Area	Curve	Descr	Sea	To	Table	9	en Field	Value	Hid	
Comparison Profile No. 3 - (DK)			A07	FSS	Ficeurae	- Seq	2	FCC		Group: 1	Master Kei		<u>- </u>
- Carlor PFGDK - Geotech. Profile No. 10 (DK)		PCOLUK	A07	IND	Induration	10	2	IND			Master Key	* L	
- Contraction - Geological Profile No. 1 - (DK)		PCOLUK	A10	IVT	InSitu Vane - Cv	2	1	IVT		0 PSet	PCOLUK		
🗁 PGSD - Geotech. Profile No. 7 - (D)		PCOLUK	610	IVTB	InSitu Vane - Cvr	3	1	IVT		1 Area	A07		
- Carlor PGSDK - Geotech. Profile No. 5 - (DK)		PCOLUK	A10	UCT		4	1	UCT		Group: 2	Key		
🗁 PGSS - Geotech. Profile No. 8 - (S)		PCOLUK	A10	LVT	Lab. Vane - Clv	4	1	LVT		2 Curve	FSS		
PJupDK1 - Jupter Profile No. 1 - (DK)		PCOLUK	A10	SPT	SPT	5	1	SPT		Group: 10	Data		1
Cimer Policie No. 2 - (DK)		PCOLUK	A10	LVTR	Lab. Vane - Clvr	5	1	LVT	_	3 Descr	Fissures		
CDK - CPT Profile No. 1 - (DK)	- F	PCOLUK	A11	MC	Moisture Content	1	1	MDV		4 Seq	9		
- 🛅 PSTCLDK - CPT Profile No. 2 - (DK - Log.)	F	PCOLUK	A11	PLA	Atterberg Test	10	5	PLA		5 Grp			
Content - CPT Profile No. 6 - (NL)	*					1	2.5	1 1 1 1 1 1		6 Tp	2		
- CPT Profile No. 4 - (UK)		1		and the second s						7 Table	FSS		
- 🛅 PSTCUK2 - CPT Profile No. 5 - (UK) 🛛 🔍			_	<i></i>				1		1.14	L.		
< <u>&gt;</u>	N.	4 1	of 10		·I   ≉ X								

Figure 46. Database page for setting up drawings.

## 3.6 History

The history module in GeoGIS2005 is used to register the updates different users perform on a SQL Server database. That is, each time a user inserts, updates or deletes a database row the following is registered:

- The user, that performed the update
- When the update was performed
- Which tables, rows and fields are updated
- What the field values were before and after the update

The updates are tied together in transactions, for example:

- All rows imported from a data file
- All rows that will be deleted when the user deletes a project or a drilling
- All rows that will be updated if the user rename a project

Each time a user logs on to the system a new transaction starts.

The user may subsequently Undo a whole transaction or a single update.

#### History of a single database row

If you want information about the history of a given database row, you mark the row by clicking the row selector in the left part of the window. Then you click the History icon in the GeoGIS2005 icon toolbar:

				Edit	I			
				Sideopsætning				
Sa	ger			Vis udskrift Udskrift	Ctrl+P			
	Firma	Sagsnr.	Titel			-	Nr	. Felt
	DGI	10057051	Rødt	Søg og erstat	Ctrl+F			Gruppe: 1
	DGI	10064201	Rødt	Filtrer udvalgte	Ctrl+K			0 Firma
•	DGI	100K77547	Rødt	Søg	Ctrl+S			Gruppe: 2
	DGI	15311451	Fehr	Historik	Ctrl+H			
	DHI	DONG77	Vibro			=		1 Sagsnr.
	DSB	012/90	Nyt c	Opiniveau			+	Gruppe: 3
	DSB	029/75	Forny	Opfrisk	Ctrl+R		· -	Gruppe: 10
	DSB	070/84	Nyt 3	Udceende			1	Б Titel
	DSB	106/76	Forny				1	7 Beskrivelse 1
<				Pivot		F	1: Sk	riv GeoXML Fil
!∎	4 3	of 29		Tegning	Ctrl+O			

Figure 48. The menu for viewing history of a single row.

GeoGIS2005										
Eiler Vindue Hjælpeværktøjer Hjælp										
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Figure 49. History list of a single update.

Here the user may flip through the different updates performed on the database row. By clicking *Undo* the user can undo an update and return to the former values.

#### **Transactions**

If you want an overview of all transactions performed on the database, you can do it by selecting the page: *History*:

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🗄 📑 🎲 🥥 😲 🎭 Database GeoGIS_Roskilde_2006_Fina 🝷 Side Historik	<ul> <li>Genveje</li> </ul>	Sidste 🔹	
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Figure 50. Selecting the History page of a given database.

Historik: GeoGIS_Roskilde_2006_Final																
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- 3904 - timmo - Logon 🗠		4 4 1	of 9													
	ت ا		01.9	× × ∧												

Figure 51. List of history transactions.

In the folder: *Transactions*, the user may see the different transactions together with their updates. The user may undo entire transactions or individual updates.

It is possible to start and stop the History function in the system's status bar:

DK MAPINFO BRS Hist På	DK MAPINFO BRS Hist Af

Figure 52. Click on Hist On / Hist Off starts and stops the History function.

The user may like to stop the History function, when doing heavy load operations. Only a administrator to the SQL Server database can stop the History function.

## 4. The Meta database

GeoGIS2005 is built in a general framework. Behind all windows, there is a number of data defining the appearance and the "dialog" between the windows. GeoGIS2005 is delivered with a complete set of windows ready for use within soil engineering, water supply etc. The GeoGIS2005 framework gives basis functionality to all windows, graphs etc. In principle, the framework can be used by all kinds of databases and is consequently not bound to geological or environmental engineering data.

The Meta database is a central part of the framework used for:

- Definitions of tables, fields and relations
- Definitions of headlines, lead texts and codes dependent on language

- Definitions of windows and their mutual hierarchy
- Definitions of the connection between databases and pages

The Meta database can be called from the System menu:

🚺 🎯 🥥   🐑   🖓 🎭   Database	System	▼ Page	System 🔻	Shortcuts	Last 🝷
			System Imports Standat GIS Plot Setup CAD Selections Query Wizards		

Figure 53. Calling Meta database.

System; Tables \ BOR \ Fields																
Folders	Fie	elds														
🖃 🛅 Tables 📃 🔼		Cntrl	Seq	DSeq	Grp	Name		Descr	Key	Mandatory	Inde:	Autonumber	Internal	Unbound	Visible	Enal
🛓 🛅 BOR		600	1	1	1	СОМ			~							
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🛁 Relations	•	2107	3	3	2	BOR			~	<b>V</b>					<b>V</b>	
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🖨 🧰 СОМ		605	5	20	10	DESCR1		() ()							<b>V</b>	<b>V</b>
- Control 🚽		606	6	21	10	DESCR2										~
Attributes		607	7	22	10	DESCR3		i i								
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		2316	19				Size	10			-	A 646-36 Ar		22167	- /-	
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CSYS1		2317	7				RowSource					- Group: II	,	Data		
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🔁 Y1		2317	B DK				Caption	Boring				3 Attribute0	àroup			
🔂 Qac1		2317	'4 S	i.			Caption	Borrhål				4 Role				
- Canal LSYS	-	2317	5 UK				Description	Boring				5 Name		Name	1	
- 🔂 Z1		2317	6 DK			1	Description	Boring				6 Value		BOR		
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🔂 X2		4512	18				Format									
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- gac2				11 22												
V	1 14	4 1	of	13 🕨 🔰	* >	0										

Figure 54. Example of table definition in the Meta database.

Meta data for the current window can also be called by use of the shortcut menu:

Metadata 🕨 🕨	View form definition
	View form relation
	View table definition
	Update table definition
	Clear cashe

Figure 55. Functions for calling Meta data for a single window.

An important function of the Meta database is to define headlines and lead texts. The user may see the actual language (Setup) in the system's Status bar:

DK MAPINFO BRS Hist Af

The language may be changed by clicking the Setup button.

## 5. Description of Functions

Below is a short description of the functions in GeoGIS2005.

#### 5.1 The Main Menu

🎯 Ge	GIS2005			
Eile	<u>W</u> indow	Utilities	Help	

<u>F</u>ile

File	
	Load settings
	Save settings
	Clear settings
	Exit

Figure 56. The File menu - used for saving and exchanging settings.

In the File menu, there are functions for saving settings of GeoGIS2005. The user can create one or more settings each having a setting suitable for the task in question. A setting defines the attached databases and shortcuts.

<u>W</u>indow

Win	dow
	Tile horizontal
	Tile vertical
5	Cascade
	Close all
	Top Most

Figure 57. The Window menu – used for arranging database windows.

In the Window menu, there are functions to arrange open database windows. In case there are several database windows open, you will see a list of the windows at the bottom. The active window is ticked off.

#### <u>U</u>tilities



Figure 58. The Utilities menu contains the GeoGIS2005's support tools.

In the Utilities menu, there are tools for processing and visualisation of data. The functions are described in detail in section 3.

<u>He</u>lp

Help		
0	Online Ctrl+F1	
	Forum	
	Manual	
	GeoGIS2005_Manual_DK	
	About GeoGIS2005	

Figure 59. The Help menu.

In the Help menu, there is a link to the GeoGIS2005 homepage and information about the installed version.

Manuals in pdf format are listed in the Manual combo box.

# 5.2 **Toolbars and Shortcut menus**

#### 5.2.1 Database Toolbar

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The database toolbar is used for calling database tools and open database windows:

	Database Administra- tor	Open dialog for setting up databases
<b>@</b>	Import, export and update	Open dialog for data exchange
<b>9</b>	GIS export	Open dialog for export of data to GIS
2	Search guides	Open dialog for predefined search
<mark>,</mark> ∎gl	Own queries	Open dialog for creating Own queries
<u>D</u> atabase Fehmarn ▼	Open selected data- base with standard page	Open a new database window containing data from the selected database
Side	Open selected data-	Open the selected page in the active database window.
Boredata 🔹	base with selected page	A page is a predefined collection of for example lists, graphs and documents describing a subject/field of activ- ity. Access to a certain kind of database is arranged in a number of "pages". The pages are called from the sys- tem's main menu.
<u>G</u> enveje Sidste	Show shortcuts in list	It is possible to make a shortcut for menu often used. Typical shortcuts could be:
		A specific drilling
		A specific waterworks Newly entered samples of water
		A particular user defined search
		"Previous" is the last used menu. The shortcuts can refer to different databases. The user can indicate a suitable lead text for each shortcut. A specific shortcut can be selected as "start-up page".

## 5.2.2 Form Toolbar

i 🗄 🔁 🔲 🤊 🗙 🖇 🛍 🛝 🕰 🖓 🔗 🔽 👬 🤌 i 💱 🖽 🖼 🗭 i

The form toolbar is used for arranging and editing database windows:

	Arrange	Arrange open database windows in such way that the win-
		dows make the best possible use of the screen without the
		windows overlapping
₽.	Cascade	Arrange open database windows in such way that they over-
		lap each other with the title visible
	Save updates	Save adjustments
5	Undo updates	Undo adjustments performed since last update
X	Delete selected	Delete selected rows
	adjustments	
X	Cut selected rows	Move/transfer selected rows to the clipboard from where you
		can copy
	Copy selected	Copy selected rows to the clipboard
	rows	
<b>2</b>	Insert copied rows	Insert copied rows
<u></u>	Print preview	Show a preview of the print on the screen before it is printed
4	Print	Print without preview
Y	Find	Open dialog for search in data present in the active list
<b>#1</b>	Find and replace	Open dialog for search followed by replace
<b>D</b>	One level up	Select the folder one level above in the tree structure
a	Change tree win-	Manage whether the tree structure should be viewed
	dow	
	Change form split	Manage split of the active window. The shift is between 3
		views: Data, data definitions and both data and definitions
↔	Adjust columns	Adjust the column width in the active list so everything is
		visible within the columns
	Order a drawing	Open dialog for ordering a drawing
	Show selected	Open GIS – and show selected rows
	data in GIS	

## 5.2.3 Drawing Toolbar

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See section 3.5 for a detailed description.

# 5.3 Shortcut Menus

#### 5.3.1 The Tree Window

Refresh
New Window
Collapse
Collapse All
Expand
Sort
Create Shortcut
Copy Menu Tree

Figure 60. Shortcut menu to the tree menu.

In the right-click menu in the tree structure, there are tools for navigating and changing the tree menu:

Refresh	Used for updating the tree menu, if it is dependent on		
	entered or changed data.		
New window	Used for opening a new database window with the se-		
	lected node as a new main node.		
Collapse	Used for collapsing a node and all related sub-nodes.		
Collapse All	Used for collapsing all node.		
Expand	Used for expanding a node.		
Create Shortcut	Used for creating a shortcut to the selected node.		
	See also section 2.3.		
Copy Menu Tree	Used for copying the tree structure to the clipboard.		

## 5.3.2 Data Window

In the shortcut menu in the data window, there are tools to find data, call functions and export data:

Edit		•	Edit	•	Accept changes Ctrl	+A
Find and replace	Ctrl+F				Reject changes Ctrl	+Q
Filter selected	Ctrl+K				Delete rows	Del
Search	Ctrl+S				Copy selected rows Ctrl	+C
Insert into selection					Cut selected rows Ctr	I+X
Open in new window					Paste copied rows Ctri	I+V
Up level	Ctrl+U				Copy and paste append rows Ctrl+	Ins
Refresh data	Ctrl+R				Append rows Ctri	(+B
Layout		•			Fill column Ctrl+Shift	.+F
Refresh layout Ctrl+:	Shift+R		Layout	•	Save form layout	Ctrl+Z
Print		•			Master view	Ctrl+M
Draw	Ctrl+O				Next view	Ctrl+N
Export		•			Toggle treeview	Ctrl+T
GIS		•			Toggle split view	Ctrl+D
History	Ctrl+H				Toggle split view orientation	
Metadata		<u> </u>			Toggle main split view	Ctrl+L
Hotadata					Toggle main split view orientation	
					Main view only	Ctrl +
					Fit rows	Ctrl+Shift+H
					Rows default height	Ctrl+Shift+D
					Freeze rows	
					Reset rows	
					Fit columns	Ctrl+W
					Freeze columns	
					Reset columns	
					Toggle database toolbar	Ctrl+Shift+A
					Toggle form toolbar	Ctrl+Shift+B
					Toggle drawing toolbar	Ctrl+Shift+C
					Toggle use of advanced detail window	Ctrl+Shift+Z
					Toggle use of metadata	
					roggie use or combo rielas	
			Print		Print Ctrl+P	
					Print preview Ctrl+Shirt+P	
					Page setup	
			Export		Excel	
					XML	
					ASUI	_
			GIS	•	GIS start Ctrl+G	
					GIS export Ctrl+Shift+G	
					GIS export selected Ctrl+I	
					GID CENTER SElected Ctri+Shift+I	

Metadata 🕨 🕨	View form definition
	View form relation
	View table definition
	Update table definition
	Clear cashe

Figure 61. Shortcut menu to the data window.

Edit	Menu for editing functions			
- Save updates	Used for saving changes. Changes are marked with a turquoise colour. Note that also deleted data should be deleted with this function			
- Undo updates	Used for undoing database updates.			
- Delete rows	Used for deleting selected rows.			
- Copy selected rows	Used for copying selected rows.			
- Cut selected rows	Used for cutting selected rows i.e. they are copied and deleted.			
- Insert copied rows	Used for inserting copied rows from the active row i.e. any existing			
	data are overwritten.			
- Copy and insert rows	Used for copying and inserting rows in a workflow.			
- Insert rows	Used for inserting previously copied rows.			
- Fill in column	Used for filling in empty fields in the active column with the selected value.			
Find and Replace	Start the Find and Replace function:			
	Find and Replace       Image: Constraint of the second secon			
Filter	Filter data in such way that only rows containing the selected			
Search	Start the standard search function. See section 3.4.1			
	Lised for selecting a folder one level above in the tree structure			
	ture.			
Refresh data	Used for refreshing data from the database. You get the same			
	result by double clicking the window heading:			

	BRegister: Feh2007B_UTM32EUREF89; Jobs		
	Jobs		
	Company Job No. Title		
	DGI 15311451 Fehman Belt		
	RAMBØLL 951100 Fehmarn Belt		
Layout	Menu for adjusting the window layout		
- Save form settings	Used for saving a form setting so the form will open with the same		
	setting next time it is opened.		
- Select main form	Used for bringing the main form into focus.		
- Next form	Used for bringing the next form in the database window into focus.		
- Change tree window	Used for changing the view of the tree window.		
- Change tree window	Used for changing between detail and list view.		
- Change form split orienta-	Used for changing between vertical and horizontal placement of the		
tion	detail window.		
- Change window split	Used for changing between views of subwindows.		
- Change window split orien-	Used for changing between vertical and horizontal placement of sub-		
tation	windows.		
- Change main form view	Used for changing between view of just the main form or the main		
	form including subforms.		
- Adjust row height	Used for adjusting the row height so that all data can be viewed with-		
	out scrolling.		
- Select standard row height	Used for selecting the standard row height for all rows.		
- Freeze rows	Used for freezing selected rows so they will not move when scrolling.		
- Release rows	Used for releasing frozen rows.		
- Adjust columns	Used for adjusting the column width to the data.		
- Freeze columns	Used for freezing selected columns so they will not move when scroll-		
	Ing.		
- Shirt database toolbar Used for shifting between viewing the database toolbar or not			
Shift form toolbar	Lised for shifting between viewing the form teelbar or not. As stan		
	dard it is shown		
- Shift drawing toolbar	Used for shifting between viewing the drawing toolbar or not. As stan-		
	dard, it is not shown.		
- Use expanded detail win-	Used for changing the view to expanded detail window. The expanded		
dow	detail window gives the user a possibility to specify how the combo		
	boxes should be shown.		
Refresh lavout	Used for reloading data and meta data and thereby refreshing		
5	the outlay of a form.		
Print	This menu is used for printing		
- Print	Used for printing out a window to a printer		
- Print Preview	Used for gotting a proviow on the screen		
- Page Setup	Used for changing have setup		
Export	This many contains functions for export of form data to Excel		
	and YMI		
Event	Used for exporting data to Excel		
	This many contains functions to surrout this is Old Constant		
	contine 2 E 1		
	Section 2.5.1		
- GIS start Used for starting the selected GIS system. As most GIS s			
	to go through a long upstart procedure, it is most convenient to start		
CIS evenent	Line GIS System before you send data from GeoGIS2005.		
- GIS export	osed for exporting an table rows in the present form to GIS.		

- GIS export selected	Used for exporting all selected table rows in the present form to GIS.
- GIS centre selected	Used for setting focus centres on the coordinates in the selected rows.
	Indication circles are drawn, buy data are not exported.
Metadata	This menu contains functions for listing and updating meta-
	data. The functions are primarily used when developing new
	forms.
- See form definition	Used for listing the metadata that describes the present form.
- See form relation	Used for listing the metadata that describes how the present form is
	related to other data.
- See tabel definition	Used for listing the metadata that describes the present form's main
	table.
- Update tabel definition	Used for updating the metadata that describes the present form's
	main table with data from the present database.
- Delete buffer	Used for deleting the internal form buffer so all meta data can be read
	again as the different windows are revisited.

## 6. Installation

#### 6.1 Hardware and Software requirements

The system must meet the following requirements:

- Microsoft Windows XP or later
- Microsoft .NET framework 2.0
- Internet browser like Microsoft Internet Explorer 6.0 or more

The customer will provide for purchase and installation of relevant viewers: (E.g. Acrobat Reader, DWG/DXF - viewer etc.), Office programs (e.g. Microsoft Excel), database software (e.g. Microsoft Access or SQL Server), GIS software (e.g. MapInfo, ArcGIS etc.) and CAD software (e.g. AutoCAD or Micro Station).

## 6.2 Installation

You may install GeoGIS2005 from the Internet or from CD.

You get the installation package from GeoGIS2005's homepage: www.GeoGIS2005.Ramboll.dk

After the installation, you start the program by using the icon on the desktop:



## 6.3 File Structure

GeoGIS2005 will be installed with the following structure:

\GeoGIS2005 Main folder for the program

\Access	Contains various system databases
\ <b>Bin</b>	Contains programs for executing
\Data	Folder for temp data
\ <b>Db</b>	Standard folder for databases
\Doc	Contains documentation in the form of PDF files
\DSCache	Contains temporary files for use in connection with Webservices
\Geoids	Folder for coordinate definitions
\I mages	Contains various bitmap files used by the drawing program
\Lib	Contains symbol files used by the drawing program
∖Map	Contains symbol files used by the drawing program
\Script	Contains script files used by the drawing program
\Work	Work areas

The most important system databases are:

GS05Sys.mdb	Meta database
G2005.mdw	Workgroup file for system databases
GS05AGS.mdb	Database for conversion of AGS data
GS05CAD.mdb	Database for setting up CAD extracts
GS05D.mdb	Seed Database for new GeoGIS databases
GS05Draw.mdb	Database for setting up plotting drawings
GS05GIS.mdb	Database for setting up GIS extracts
GS05Import.mdb	Database for setting up import- and export programs
GS05XML.mdb	Temporary database, used when entering standard files

The user can choose any main folder for installation.

#### 6.4 MapInfo Tools



The GeoGIS2005 MapInfo toolbar is defined in the file:

..\Bin\GeoGIS2005.MBX

The toolbar is normally added to MapInfo automatically if the program is called from GeoGIS2005. The user may also add the function manually by using the MapInfo Tool Manager.

#### 6.5 ArcGIS Tools

As standard, the GeoGIS2005 ArcGIS tools may be used for ArcGIS version 9.0, 9.1 and 9.2. Contact Rambøll for support of earlier versions.



The GeoGIS2005 ArcGIS toolbar is defined in the files:

- ..\Bin\GeoGIS2005ArcGIS.dll
- ..\Bin\GeoGIS2005ArcGIS.reg
- ..\Bin\GeoGIS2005ArcGIS-Install.bat

When installing GeoGIS2005 for the first time and when updating the program, the file Geo-GIS2005ArcGIS-Install.bat will be executed.

Next the toolbar in ArcMap > Tools > Extensions should be activated:

Extensions	? 🗙
Select the extensions you want to use. └─✔ GeoGIS2005 Extension	
Description: This is an extension to GeoGIS2005.	
About Extensions	e

Figure 62. Activating GeoGIS2005 toolbar in ArcGIS/ArcMap

#### 6.6 Licenses

When GeoGIS2005 is installed on a PC and executed for the first time, it is provided with an installation number. The user must have a corresponding set of license numbers before being able to use the program.

How to obtain license numbers is described in detail in section 3.1.4.

#### 6.7 GeoGI S2000 databases

GeoGIS2005 can exist together with earlier versions of GeoGIS2000 and work with the same databases. There is no problem with running both versions in a transition phase.

When installing GeoGIS2005 the user can choose to enter the attached databases from the GeoGIS2000 installation. In this way, the user will find it easy to get started with the previously used databases.

## 7. User Support and Forum

The address www.GeoGIS2005.Ramboll.dk gives access to a user forum for registered users and possibility to get new versions of GeoGIS2005 etc.

## 7.1 Download of GeoGI S2005

The Internet address: www.GeoGIS2005.Ramboll.dk gives access to the user support page:

C Om GeoGIS2005 - Windows Inte	rnet Explorer			
GO - \land http://geogis2005.ram	boll.dk/omgeogis2005/tabid/53/default.asp×	🖌 🗲 🗙 Google	<b>ب</b> م	
Eile Edit View Favorites Tools	Help			
😭 🏟 🛷 Om GeoGIS2005		🙆 • 🔊 ·	🖶 🔹 🔂 Page 🔹 🍈 Tools 🗸 🎽	
	GeoGIIS2005			
Om GeoGIS2005 Download K	ontakt	Søg	Dansk (Danmark)	
7. januar 2007	.::: Om GeoGI52005 ::		Registrer Log ind	
GeoGIS2005				
<ul> <li>GeoGIS findes i to versioner:</li> <li>GeoGIS2000, den primære version i brug hos amterne i dag. Denne version er programmeret i Microsoft Access 2000 og tilgår typisk data direkte i en Microsoft Access database eller i en SQL Server 2000 database. Support af denne version ophører i 2007.</li> <li>GeoGIS2005, den nyeste version. Denne version er programmeret i .Net 2005 og kan udøver de sædvanlige databaser også tilgå data vha. en webservice.</li> <li>Ønsker du at døwnloade den nyeste version skal du være en registreret bruger.</li> </ul>				
Convright 2006 by Rambell - Vilkår for anvendelse - Om beskyttelse af private onlysninger				
DotNetNuke® is copyright 2002-2007 by Perpetual Motion Interactive Systems Inc.				
		Sucal intra	anet 🔍 100% 🔹 📰	

Figure 63. GeoGIS2005's homepage.

By clicking **Download**, it is possible to download installation files and license conditions:

C Download - Windows Internet Explorer		
G V + 🗟 http://geogis2005.ramboll.dk/C	mGeoGIS2005/tabid/53//Download/tabid/57/Default.	ast 🗙 🔶 🗙 Google
Eile Edit View Favorites Tools Help		
🚖 🏟 🕫 Download		🐴 🔹 🔝 🔹 🖶 🕈 📴 Eage 🗸 🎯 Tools 🗸 *
	GII.S2005	C Danie (Daamate)
7 januar 2007	" Download "	Sog Dansk (Danmark)
Downloads og opdateringer Nye versioner og opdateringer af GeoG	IS2005	8
GeoGIS2005	2006.12.18	
Version 1.0.85 - Download Beta Version 1085	Version 1.0.85 indeholder:	
	<ul> <li>PC Jupiter</li> </ul>	
Opdatering kræver licens Licensbetingelser		
		v state sta

Figure 64. Download of new versions and updates to GeoGIS2005.

By clicking Download, you can save and subsequently install the installation package:

🕥 🗸 🍕 http://geogis2005.ramboll.dk/OmGeo	3IS2005/tabid/53//Download/tabid/57/Default.as; 🕶 😽 🗙 Google
File Edit View Favorites Tools Help	
🕸 🤕 Download	🚵 👻 🗟 🔹 🖶 Page 🛩 🎯 Tools -
RAMBOLL GeoGIA	S2005 File Download - Security Warning
anuar 2007	Do you want to run or save this file? Registrer Log in
Downloads og opdateringer Nye versioner og opdateringer af GeoGIS20	Name: GeoViewer_1085.msi Type: Windows Installer Package, 14,1MB From: geogis2005.ramboll.dk Run Save Cancel
GeoGIS2005 Version 1.0.85 - Download Beta <u>Version 1085</u>	While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do not run or save this software. <u>What's the risk?</u>

Figure 65. Installation from download page.

#### 7.2 Forum

By click on Forum, you get access to GeoGIS2005's user forum, where it is possible to find answers to your questions, ask questions yourself or comment other GeoGIS user's contributions and questions.

You get access to GeoGIS2005's user forum by registering as a user on www.GeoGIS2005.ramboll.dk with user name, password and e-mail. It is important that the e-mail address is identical to the one used when installing GeoGIS2005 – See the description of the Database Administrator – Licenses tab, section 3.1.4.

The forum may also be called from the help menu in GeoGIS2005.