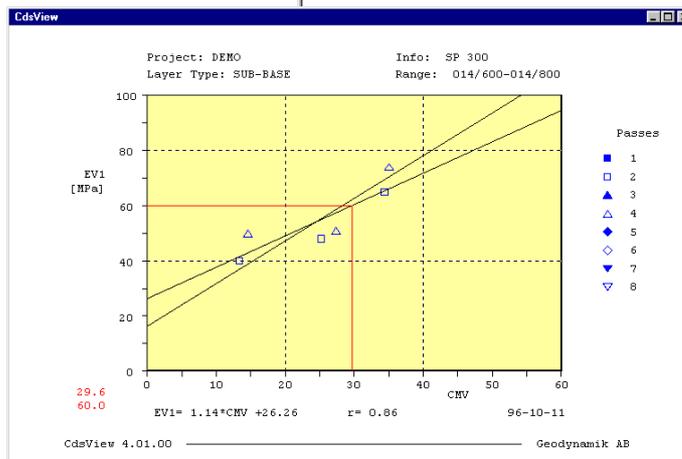
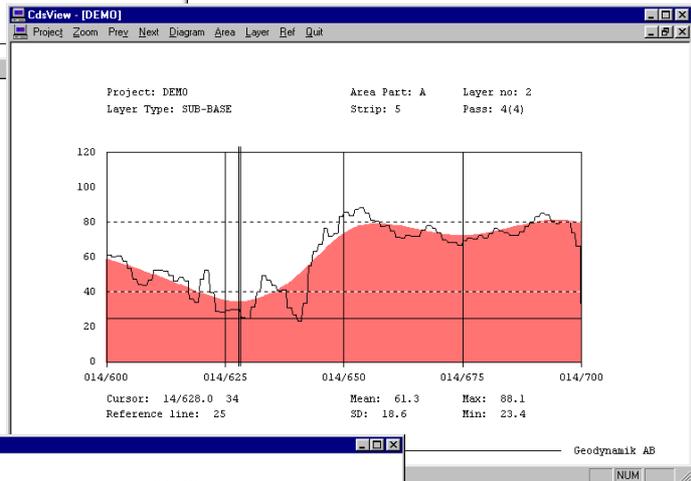
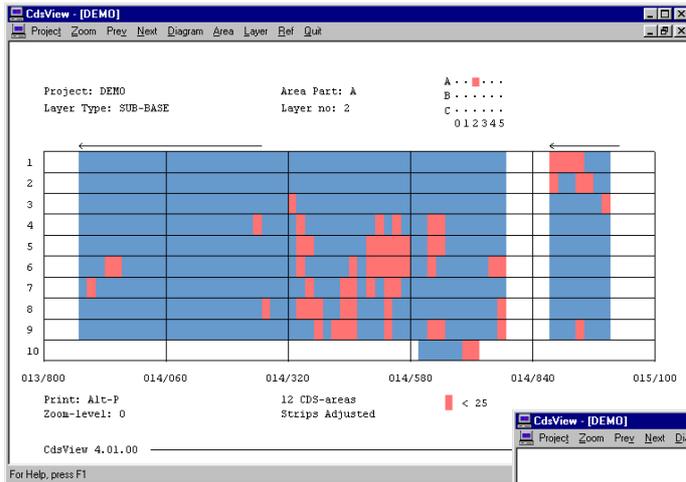


PC program for processing and analysing CDS-data

CdsView



Contents

I Introduction	3
1 Introduction	3
II System requirements	4
1 Computer	4
2 Monitor	4
3 Serial ports	4
4 Printer	4
III Installing CdsView	6
1 Contents of the CD	6
2 Installation	6
3 Making a security copy	6
4 Running CdsView	6
IV Using CdsView	8
1 Main menu	8
2 Presentation	8
Selecting Project and Layer type	9
Project	10
Zoom	11
Diagram	12
Area	14
Layer	14
Ref	14
Strip adjustment	14
3 Calibration	15
New calibration	15
Append/Edit	17
Contents	18
Diagram	19
Remove calibrations	21
Recall calibrations	22
4 Transmission	22
Transmission from CDS	23
List contents	23
Edit files	24
CCC-report	26
5 Setup	28
6 Exit	28

V Summary of key sequencies	29
1 Key sequencies	29
VI Organizing Compaction Control	30
1 Planning	30
2 Recording with CDS	30
Index	33

1 Introduction

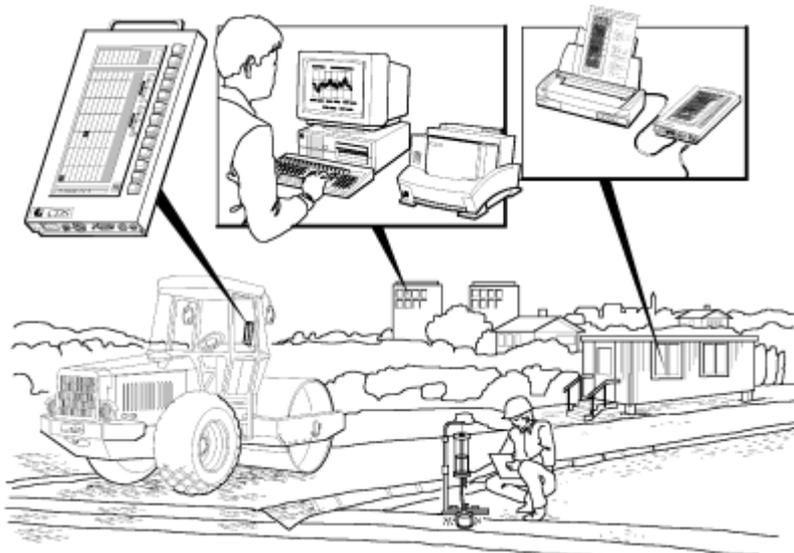
1.1 Introduction

CdsView is designed to handle data collected by [Geodynamik's Compaction Documentation System - CDS](#). Calibration data obtained from conventional control methods are entered manually.

Data in CDS-files and from calibrations can easily be processed and analysed.

You can handle considerable quantities of data, and quickly find the information you need. The program provides information in both overview and detailed form.

The figure illustrates how **CdsView** fits into a system for compaction control, based on a compaction meter and the storage of data from the meter in a documentation system of the CDS type.



2 System requirements

2.1 Computer

CdsView requires the following equipment:

1. An IBM compatible PC with a Microsoft Windows operating system, version 95, 98, 2000, ME or XP.
2. A CD-drive and a hard disk.

CdsView can be used with a mouse but also with the keyboard alone.

A printer is useful for the printout of Overviews, Diagrams, Calibration diagrams and listings produced by the program.

2.2 Monitor

CdsView is most effective on a colour XVGA monitor with a resolution of 1024x768 or more and at least 24-bit color.

However, the program can also be run on monochrome or LCD monitors and on monitors with lower resolution and lower number of colors.

2.3 Serial ports

A serial port is used to transmit data from the **CDS**.

If there are more than one serial port available, COM1 is by default assumed to be connected to CDS. This is, however, configurable from within the program.

CDS is set up for transmission at 9600 baud, no parity, 8 data bits and 1 stop bit.

The protocol used is XON/XOFF.

2.4 Printer

Printout of summaries, diagrams and tables can be made on a printer connected to a parallel port, USB-port, serial port or a network.

In order to print diagrams, the printer must be able to handle graphics images.

The printouts of overviews and diagrams will be in colour if the printer can print in colour. If you don't want colour printouts, change to black/white in the printer's properties dialog.

When printing overviews and diagrams a common print dialog is first displayed. In the dialog it is possible to change settings, e.g. destination printer, colour or black/white and portrait/landscape orientation.

Listings from dialogs in the program are sent to the default printer directly without showing a print dialog first.

3 Installing CdsView

3.1 Contents of the CD

The CD contains files necessary for the installation of the CdsView program.

There are also demo data files included that are copied to your system to make it possible to test the program after the installation.

The demo data files can be deleted when they are not needed any more.

3.2 Installation

Assuming that you are going to install the software from CD drive D: to your hard disk named C:, the installation is done as follows:

1. Insert the CD in drive D
2. Run D:\Setup
3. Accept the default drive and directory to install CdsView or enter your own choice
4. Confirm by pressing Enter or cancel the installation by clicking Cancel or pressing Esc

If your CD drive or hard disk is identified by another letter, substitute the appropriate letters in the commands.

If you accept the proposed drive and directory, the software will be installed on the hard disk and a subdirectory **.ldata** will be created.

The **.ldata** directory will contain the demo data delivered on the CD and will later receive the data files generated when data are transferred from CDS. The place for the data-files can be changed any time from the Setup menu of the program.

If CdsView for Windows is already installed on your computer, you will be told to remove the old version before the new installation is made.

3.3 Making a security copy

You may make a security copy of the original CD as a safety backup or store a copy of the CD on a hard disk.

In case the CD is accidentally damaged, Geodynamik will ship a new copy at cost price.

3.4 Running CdsView

To run CdsView, doubleclick on the icon that was created on your screen desktop or find the CdsView.exe file in *My Computer* or *Explorer* and doubleclick on the file name.



4 Using CdsView

4.1 Main menu

When you start the program, you will see the following menu on your screen:



Presentation

Overview and detailed diagram presentation of CMV-data recorded on CDS.

Calibration

Handling of calibration data from conventional point tests and corresponding CMV.

Transmission

Transmission of data from CDS, listing of datafile contents, editing of datafiles, printout of CCC-reports.

Setup

Setting of File prefix, Path for datafiles, Language, COM-port and Parameter for calibration diagrams.

Exit

Ends CdsView.

Help

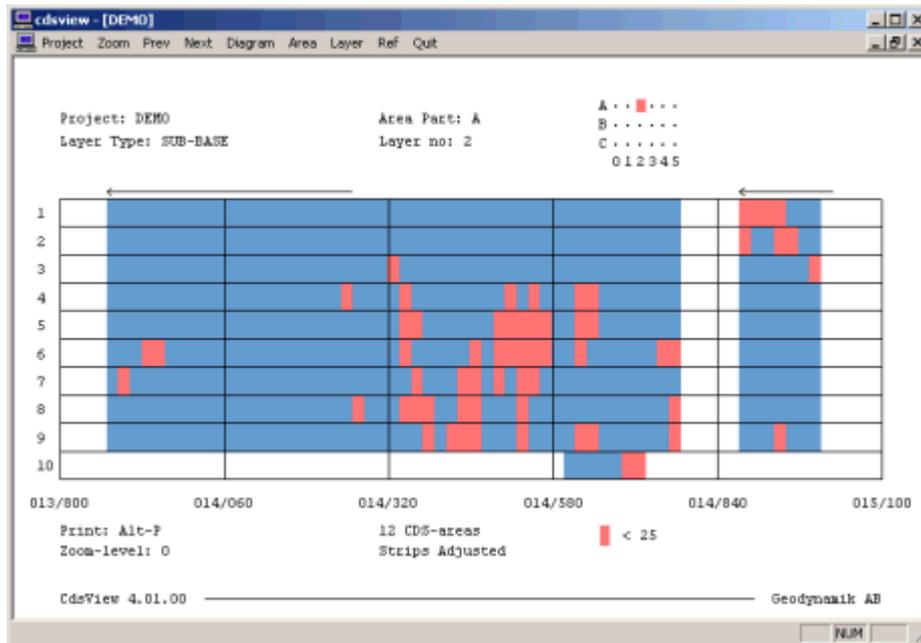
Windows help for CdsView

Before you start working with CdsView, it is advisable to first choose Setup in order to supply appropriate values to various parameters needed by the program.

4.2 Presentation

This part of the program presents overviews and detailed displays of pre-entered CMV-recordings.

Data for a particular project and a particular layer type is collected from all the files created when data is transmitted from the CDS to the PC. You can then quickly change between different areas and layer numbers and get an overview plan that shows the location of the collected data.

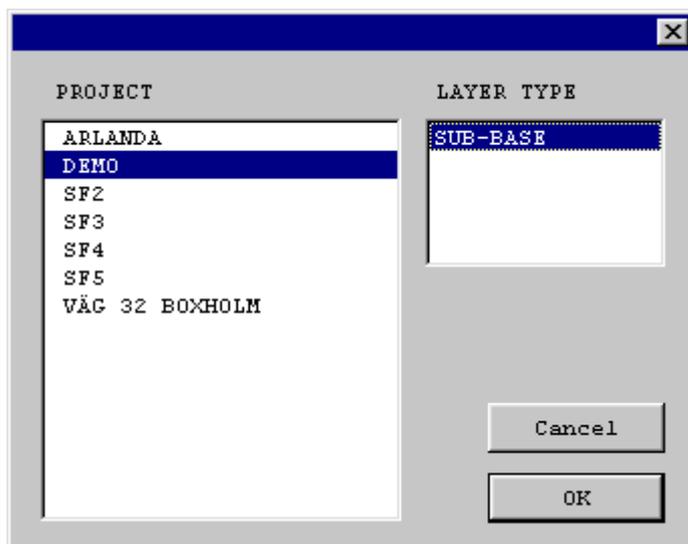


Detailed information can be displayed by zooming in a section of interest.

Still more detailed information can be presented in the form of a diagram, that displays detailed compaction information for a given roller strip and pass. Diagrams can be displayed for all passes on a strip in sequence.

4.2.1 Selecting Project and Layer type

If you select **Presentation** with the mouse (ALT+P with keys), a popup-menu appears. This displays all the project names in the stored data files. The names are sorted in alphabetical order.



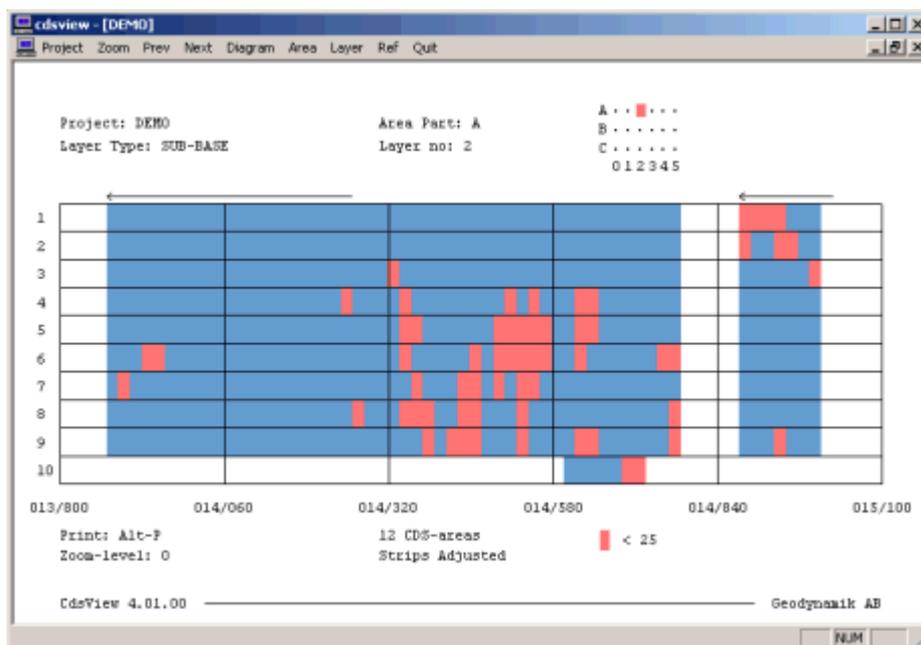
Select a **Project** name with the mouse or by using \uparrow or \downarrow . Switch to the **Layer type** menu by doubleclicking on the Project name or press the \rightarrow key. Select one of the available Layer types.

In case the naming of the layer types were not changed during the acquisition of data by the CDS, the following standard alternatives may be listed:

1. ROADBASE
2. SUB-BASE
3. CAPPING LAYER
4. SUBGRADE

4.2.2 Project

When a **Project** and a **Layer type** has been selected, the program searches through the data files, and collects all the data relevant to the project and the layer. This process is concluded with the display of an overview of the records and a new manu bar as shown:



In the upper right part of the screen is a matrix showing which combinations of area and layer contain data. Solid blue rectangles indicate that there are data in the files. A dot means that there is no information available. The combination selected at any particular time is shown as a red rectangle.

The main part of the screen is occupied by an **overview** consisting of 10 roller **strips**. The horizontal axis represents the sections at which values have been entered. The horizontal scale varies in accordance with the length of the compacted area and the points at which measurements have been made. It can vary from 100 m to tens of kilometres.

The **overview** screen shows

- for which sections data has been recorded
- which roller strips are recorded
- strips registered in the decreasing direction (negative) and whether the numbering of the strips in these sections is in the reverse order (strip adjustment).
- a coarse picture of the sections with values below a selected reference value.

For a given project and **layer type**, CdsView can process up to 500 CDS-areas simultaneously.

The number of CDS-areas currently being processed is shown at the lower edge of the screen.

Note that the picture always shows the compaction results after the last compaction pass of a particular section.

When the width is greater than 10 roller strips (approximately 20 m) the successive strips appear in the next portion of the area (B or C). You can quickly switch between the different portions of the area by selecting **Area** or pressing **Alt+A**. See the topic **Area**.

In the overview screen, the areas with recordings is displayed in two different colours. Solid (blue) rectangles show parts with a **CMV**-value over the selected reference value, while dotted (red) rectangles show parts with values under the reference value.

How to change the **reference value**, see the topic **Ref**.

Since the horizontal scale can vary considerably, the resolution of the image varies also on the same axis. The total length is always 70 rectangles, so that one rectangle on the screen can represent anything from a few decimetres to several hundred meters. The principal followed is that, if any of the values in the area represented by a character is below the selected reference value, the whole area is shown as a **red** rectangle.

The picture then indicates that somewhere within the area represented by a **red** block, there is at least one recorded **CMV** value below the selected reference value. If the picture shows a long section, this means that the **red** areas become somewhat exaggerated.

On the other hand, it is essential that the areas with low values are not missed. You can always obtain a more accurate picture of the areas with low values by enlarging the image (**zooming**) so that the whole of the displayed section becomes shorter than about 100 m.

"Zoom-level: 0" indicates no zooming, the whole registered length is shown.

The diagram can be printed by pressing **Alt+P**.

Go back to the main menu by selecting **Quit**.

4.2.3 Zoom

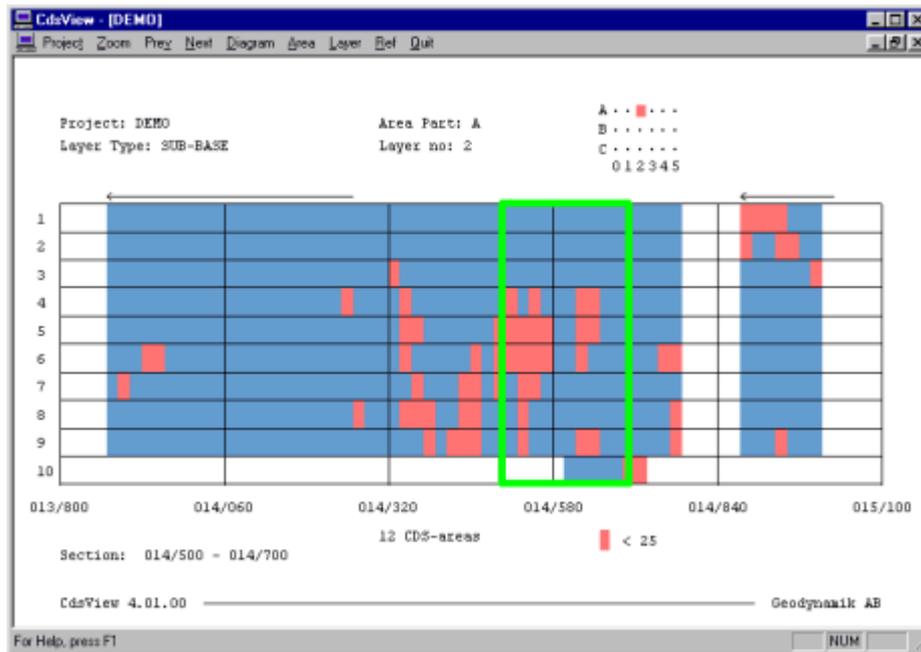
Zooming, or enlarging, can be used to show a part of the overview over the whole width of the monitor screen, and therefore to a larger scale.

Activate the Zoom function by selecting **Zoom** in the menu (ALT+Z with keys).

A vertical green highlight bar will be displayed over the picture, which can be moved horizontally with **→** and **←**. Move the marker to the right or left edge of the area you wish to enlarge.

Lock that point by pressing the space bar or the period.

Expand the high-lighted section by using the **→** and **←** keys. The starting point can always be re-selected by pressing the space bar or period again.



Press Enter to zoom in. The chosen area now fills the whole screen. The zoom level number increases by one and is shown in the bottom left corner.

The zoom process can be repeated.

The menu options **Prev** and **Next** are used to switch back and forth between the zoom-levels.

4.2.4 Diagram

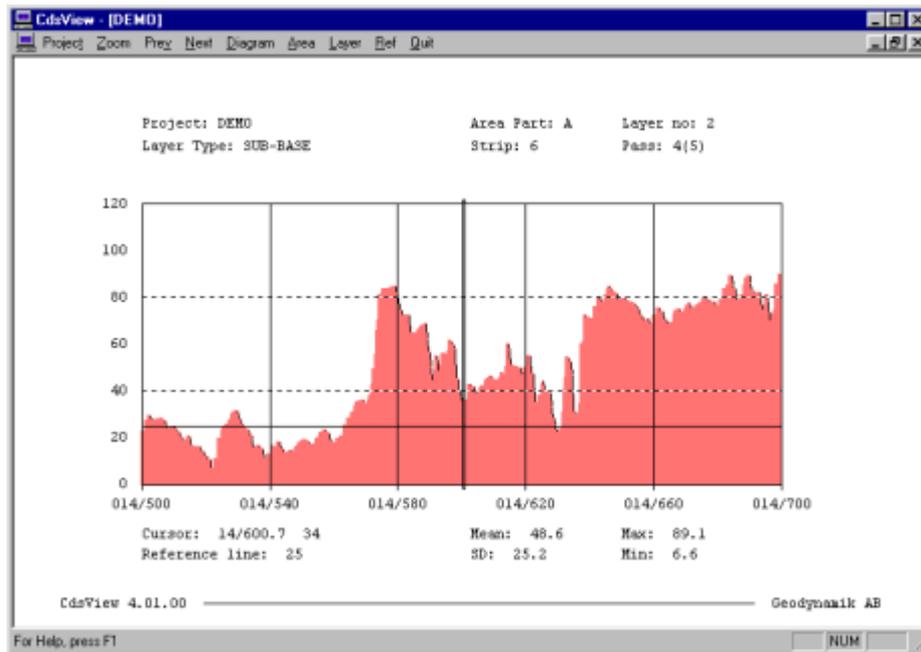
The records along a roller strip can be presented in the form of a **diagram**.

When Diagram is selected, a green highlight bar appears in the middle of **strip** number 1.

1. Place the highlight on the strip and section where you wish the diagram to begin.
2. Press the space bar or period to lock the starting position.
3. Extend the highlighted area with the **→**, **←**, **Home** or **End** keys.

The selected area is framed by a green rectangle and the section and strip number are shown in figures below the overview picture.

When you have completed the selection, press **Enter** and the diagram will be calculated and displayed on the screen.



The first picture that is displayed applies to the last pass. In the top right part are numbers indicating which pass is being shown and how many passes there are in all. You can change the pass number by pressing **PgUp** or **PgDn**.

A horizontal reference line corresponding to the reference level set in the overview screen, can be used to compare levels between different passes. The line can be moved up and down with the **↑** and **↓** keys.

The location of the reference line is shown in figures at the bottom left.

A vertical marker line can be used to measure the CMV value at an arbitrary point. The section and its CMV value at the point of intersection with the marker line are displayed in figures at bottom left. The vertical marker can be moved with the **→** and **←** keys or with **Tab** or **Shift+Tab**. Hold down the **Ctrl**-key to get large steps.

The CMV-axis scale can be changed by pressing the **+** or **-** key. The scale can be changed between 0-120, 0-60 and 0-30. The scale set here will be used in all the other diagrams in CdsView.

At the bottom of the screen appears statistical information for the displayed section:

- Mean** = average CMV in the section
- SD** = the standard deviation for the data
- Max** = the largest value in the section
- Min** = the smallest value in the section

The line can be filtered through two alternate filters, that smooth out the line. This is useful if you want to study the larger trends without being distracted by detailed variations of CMV.

Filtering can be selected with **Alt+F**, or, for the more powerful filtering, **Ctrl+F**. The first time you press the selection, the original line and the filtered version appear together. If you press the keys again, the original line disappears.

When you choose one of the filters, the values at the bottom of the screen relate to the filtered

line, and not to the original.

The diagram can be printed by pressing **Alt+P**.

You can leave the diagram mode by pressing **Esc**. The screen then returns to the overview picture which was shown before **Diagram** was selected.

4.2.5 Area

This option is used to change between area parts **A**, **B** and **C**.

The actual area part is shown at the top right, both in characters and as a matrix that shows which combinations of area parts and layer numbers are represented.

4.2.6 Layer

This option allows you to change between the layer numbers for which data has been recorded.

Available numbers are from 0 to 5. The selected layer number is shown in figures and in the matrix at the top right.

4.2.7 Ref

With this menu option you can set the reference value in CMV units.

This parameter determines which areas, with a value over the reference value, will be shown with a **blue** colour, and which areas, with values below the limit, will be displayed with a **red** colour.

You can change the reference value by first selecting **Ref** in the menu (ALT+R with the keys), and then entering the new value.

The selected Reference value is saved and becomes the default value next time you start the program.

4.2.8 Strip adjustment

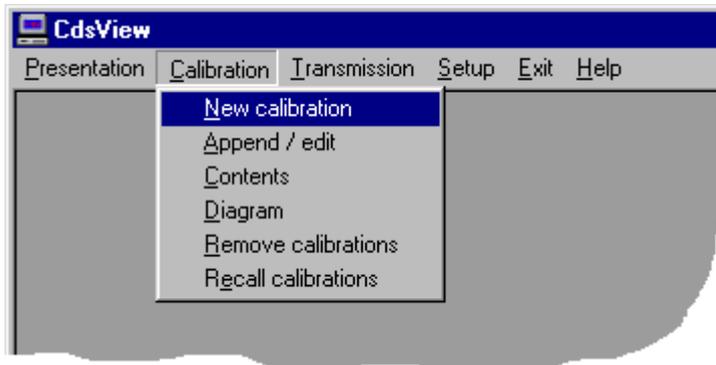
In overview mode, strip adjustment is selected by pressing **Alt+J**.

Each time this key combination is pressed, the strip adjustment function toggles from on to off and back to on.

When strip adjustment is on, this is indicated in text under the overview picture.

4.3 Calibration

The menu item **Calibration** is intended for manual entry of the results from conventional test methods, which are performed in areas documented by **CDS**.



The results are presented together with **CMV** values which the program automatically locates in the files of recorded data. The data is presented in the form of tables or diagrams.

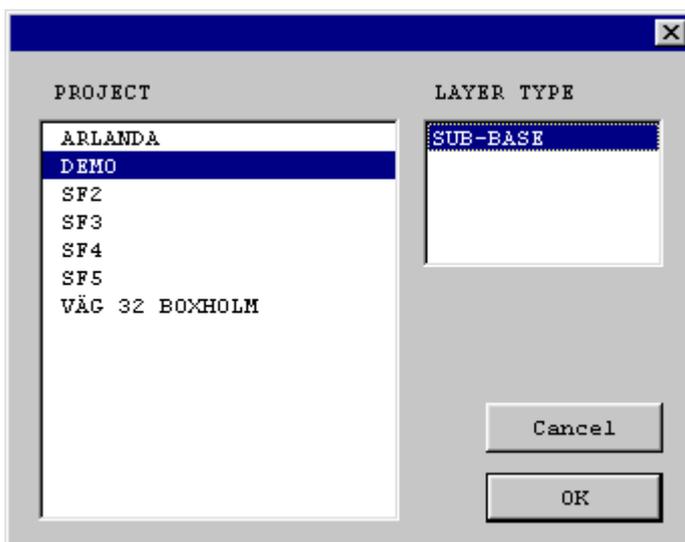
Calculations and entries in CdsView are limited to comparisons between CMV values and some of the common point control methods:

1. Relative density
2. Density
3. E-modulus - for example FWD
4. EV1 (static load test, first load cycle)
5. EV2 (static load test, second load cycle).

4.3.1 New calibration

This is the menu alternative for manually entering data for a new calibration.

Chose **Project** and **Layer** as required.



A new dialog will appear:

Project: DEMO Cancel

Layer Type: SUB-BASE

Range: 014/000-015/000 Add

Info: FWD 300

Range: Determine which section of the horizontal axis the calibration should relate to.

Info: Free text for further description of the test method. This text will be displayed subsequently on diagrams and in tables.

Select **Add** and the dialog below will be displayed showing the alternative point methods that are available.

Choose an option and select **OK**.

Select type:

- Rel Dens
- Density
- E-mod**
- EV1
- EV2

OK Cancel

When all necessary information has been supplied, another dialog is shown. Data for the point test is entered in the fields. Use the mouse or Tab/ShiftTab to move between the fields. When all edit fields are filled, the corresponding CMV is calculated by CdsView and shown in the rightmost field.

SECTION	AREA	LAYER	STRIP	PASS	E-mod	CMV
000 / 000		0	0	0	0	0

Cancel OK

The entered values are validated by the program. For example, **AREA** must contain a value of **A**, **B** or **C**. If you try to enter an unacceptable value, you will not be able to exit the field in the normal way.

Project: DEMO

Layer Type: SUB-BASE

Range: 014/000-015/000

Info: FWD 300

Project: DEMO Range: 014/600-014/800

Layer Type: SUB-BASE Info: SP 300

Date: 96-10-11

SECTION	AREA	LAYER	STRIP	PASS	EVL	CMV
014/492	A	2	6	2	40.0	13.3
014/492	A	2	6	4	50.0	14.5
014/505	A	2	6	2	48.0	25.2
014/505	A	2	6	4	51.0	27.3
014/568	A	2	6	2	65.0	34.4
014/568	A	2	6	4	74.0	35.0

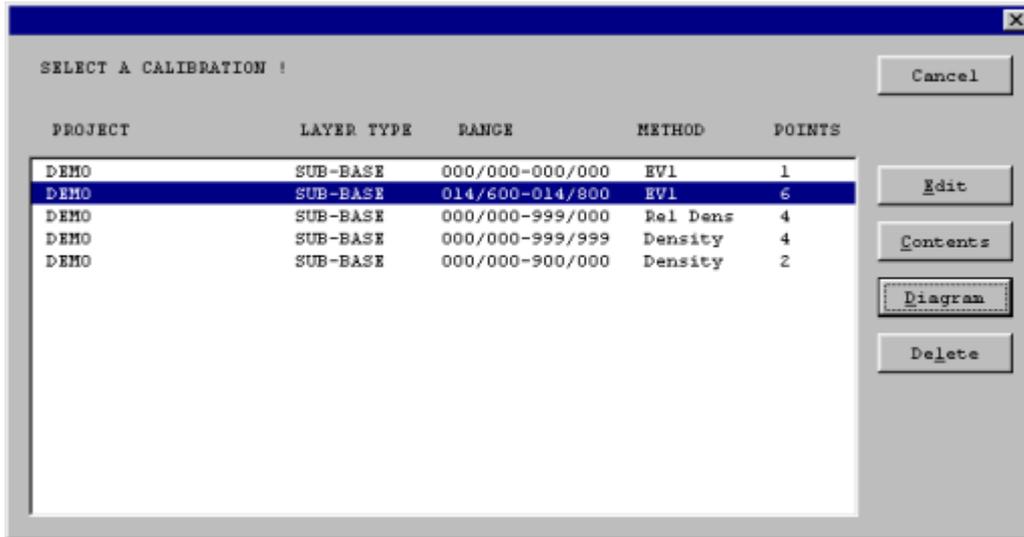
Add or Delete points !

SECTION	AREA	LAYER	STRIP	PASS	E-mod	CMV
000 / 000		0	0	0	0	0

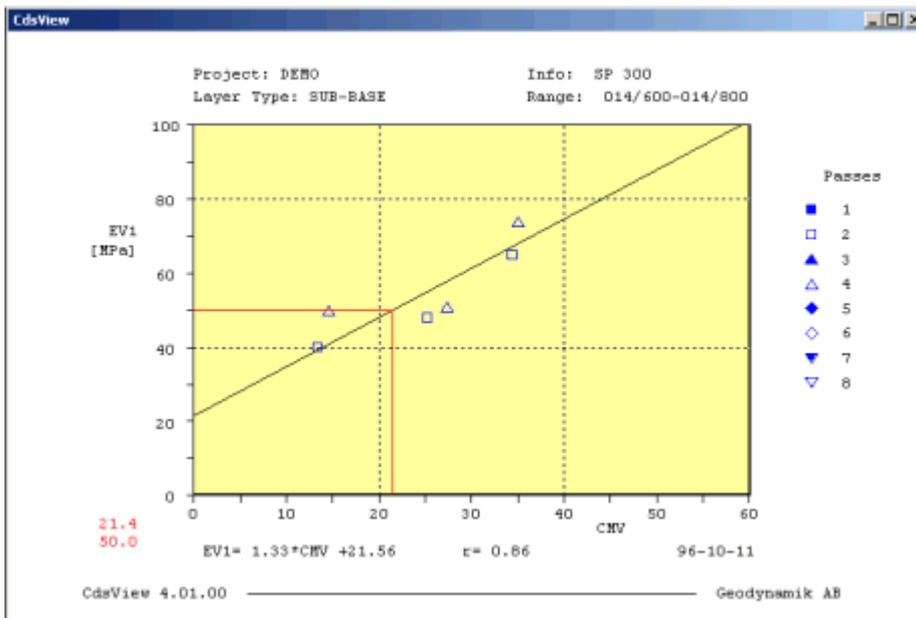
4.3.3 Contents

This is used to display calibrations in a table form on the monitor, or to print the table on a printer.

A table of all calibrations is displayed:



Select the calibration to be presented as a diagram by moving the highlight. Select **Diagram** and the diagram will appear on the screen:



A regression curve that represents a linear relation between the point method's results and the equivalent CMV values is calculated. The CMV values are calculated by CdsView as the mean of three consecutive values recorded by the CDS.

This implies that the CMV value calculated roughly represents the average compaction value of a square the sides of which are approximately equal to the width of a roller.

The point method on the other hand is valid for that point at which the test was performed. If the test was a static plate load test, this usually means a circular area with a diameter of 0.30 m. Certain other test methods produce results that apply to even smaller areas.

It is therefore perfectly natural that the diagram often displays great scatter.

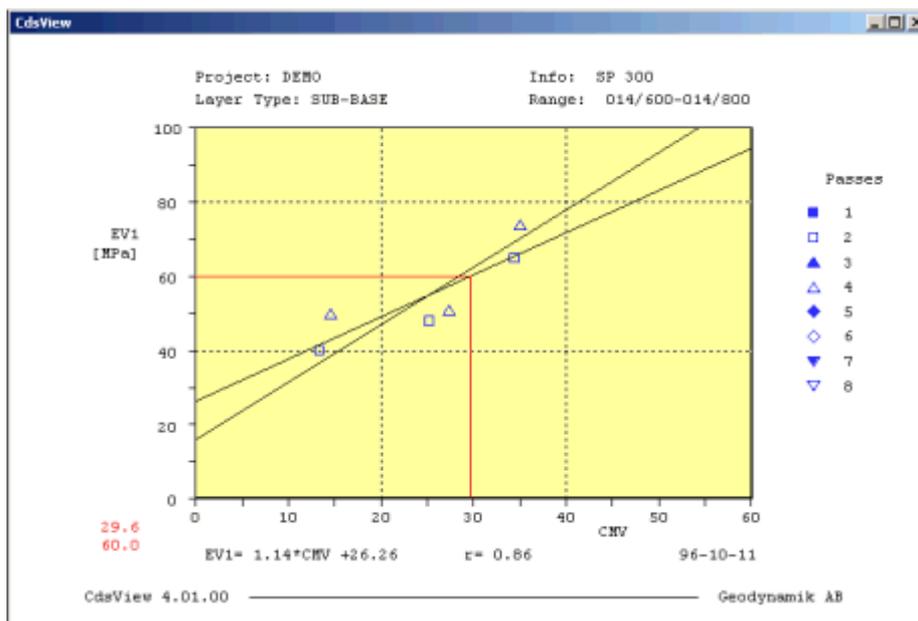
The calculation of the regression line differs from country to country depending on the differences in norms and standards between countries. The regression line can be calculated in two ways, depending on which variables are regarded as dependent/independent.

Since both the point method's values and CMV values are scattered, it is advisable to use an average line that lies between the two calculated regression lines. This is the method that is often used.

There are three alternatives to calculate the regression line in CdsView, namely:

1. Average
2. CMV independent
3. CMV dependent

Select one of the above alternatives from the Setup menu.



This figure shows a case where both regression lines are drawn. In this example, alternative 2 above was selected and the cursor follows the less inclined line. Here, CMV is assumed to be the independent variable and EV1 the dependent variable.

The equation for the regression line and the regression coefficient are displayed under the diagram. The equation displayed is that of the line that the cursor follows.

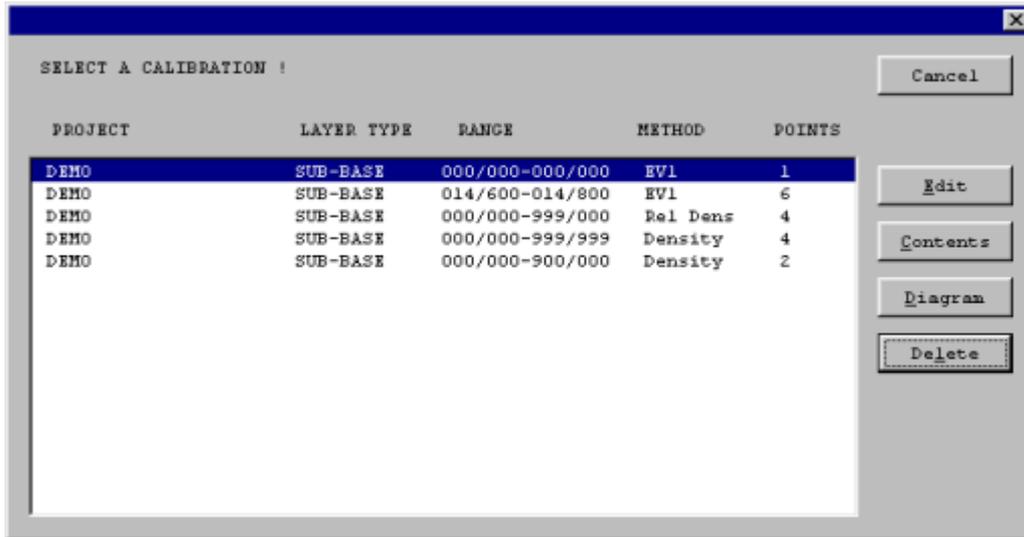
The date at bottom right states when data was last entered into the calibration in question.

The diagram can be printed with the command Alt+P.

4.3.5 Remove calibrations

This is used to remove one or more calibrations from the system.

A list of all calibrations is displayed on the screen:



Select the calibrations you wish to remove by highlighting them. Hold down the Ctrl-key if you want to select more than one calibration.

Choose **Delete** to delete them or **Cancel** (Esc-key) if you change your mind.

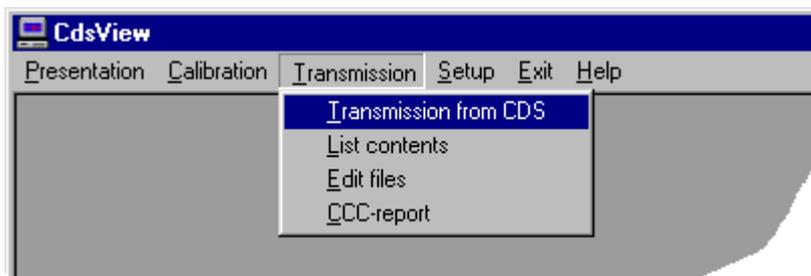
4.3.6 Recall calibrations

Calibrations are not physically eliminated from the file, but are marked with a code so that they are no longer displayed on lists of calibrations.

Deleted calibrations can thus be restored later, if necessary.

The menu option Recall calibrations, restores calibrations that were removed from the list. These can then be accessed again.

4.4 Transmission



This menu option contains a number of routines for the handling of CDS data.

You can receive data from a CDS-unit. It is possible to examine a table of contents for the files in the system and to edit certain values that may have become corrupted in connection with data entry.

CCC-reports can be shown on screen or printed.

4.4.1 Transmission from CDS

This option is used when transferring data from **CDS**.

1. Connect CDS to the serial port selected in the Setup menu.
2. Connect the AC adapter to CDS and to the net.
3. Switch on CDS.
4. Select **Transmission from CDS**.

Select **Start** in the dialog. The dialog shown below will appear, with the name and place for the datafile that is about to be created shown in the **Communication info** window.



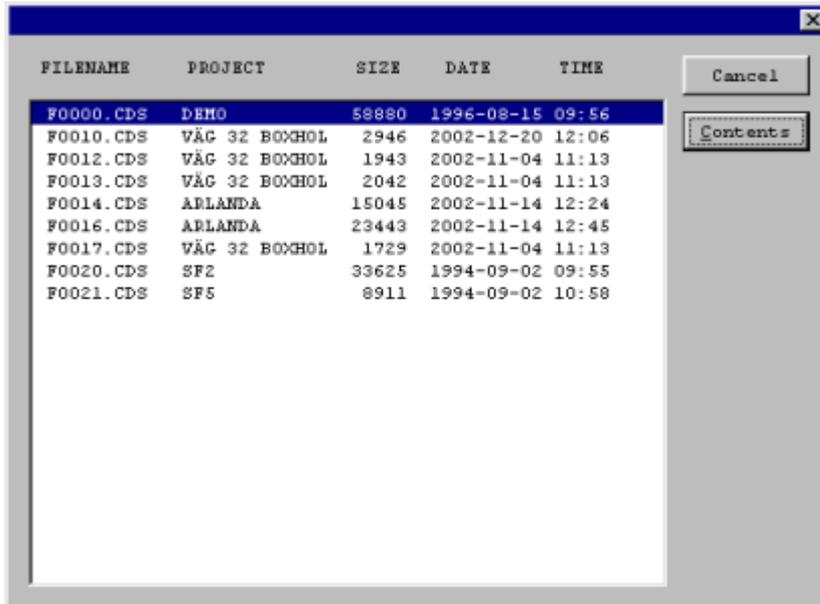
The PC is now ready for reception of data and you can start the transfer from the CDS by selecting the areas to be transmitted, and pressing the start button on the CDS.

The transmission can be followed on both CDS and the PC screen. After each transferred area a line of text is added in the upper window of the dialog showing details for the area just transferred.

4.4.2 List contents

You can use this option to list the table of contents of files in the system, and to list details of the contents of particular files.

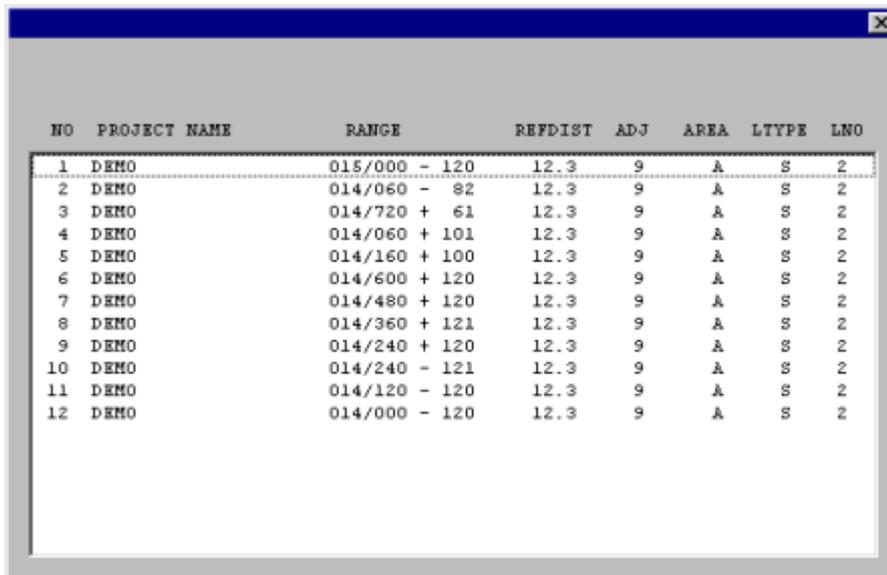
Select **List contents** from the menu! The PC screen then displays a list of all files in the system, as in the picture below.



FILENAME	PROJECT	SIZE	DATE	TIME
F0000.CDS	DEMO	58880	1996-08-15	09:56
F0010.CDS	VÄG 32 BOXHOL	2946	2002-12-20	12:06
F0012.CDS	VÄG 32 BOXHOL	1943	2002-11-04	11:13
F0013.CDS	VÄG 32 BOXHOL	2042	2002-11-04	11:13
F0014.CDS	ARLANDA	15045	2002-11-14	12:24
F0016.CDS	ARLANDA	23443	2002-11-14	12:45
F0017.CDS	VÄG 32 BOXHOL	1729	2002-11-04	11:13
F0020.CDS	SF2	33625	1994-09-02	09:55
F0021.CDS	SF5	8911	1994-09-02	10:58

If you wish to study the contents of a particular file, a detailed table of its contents can be displayed, as in the figure below. To do this, highlight the selected file and select **Contents**.

The lists can be printed with the key combination **Alt+P**.



NO	PROJECT NAME	RANGE	REFDIST	ADJ	AREA	LTYPE	LNO
1	DEMO	015/000 - 120	12.3	9	A	S	2
2	DEMO	014/060 - 82	12.3	9	A	S	2
3	DEMO	014/720 + 61	12.3	9	A	S	2
4	DEMO	014/060 + 101	12.3	9	A	S	2
5	DEMO	014/160 + 100	12.3	9	A	S	2
6	DEMO	014/600 + 120	12.3	9	A	S	2
7	DEMO	014/480 + 120	12.3	9	A	S	2
8	DEMO	014/360 + 121	12.3	9	A	S	2
9	DEMO	014/240 + 120	12.3	9	A	S	2
10	DEMO	014/240 - 121	12.3	9	A	S	2
11	DEMO	014/120 - 120	12.3	9	A	S	2
12	DEMO	014/000 - 120	12.3	9	A	S	2

4.4.3 Edit files

This is used to edit certain information in CDS-files.

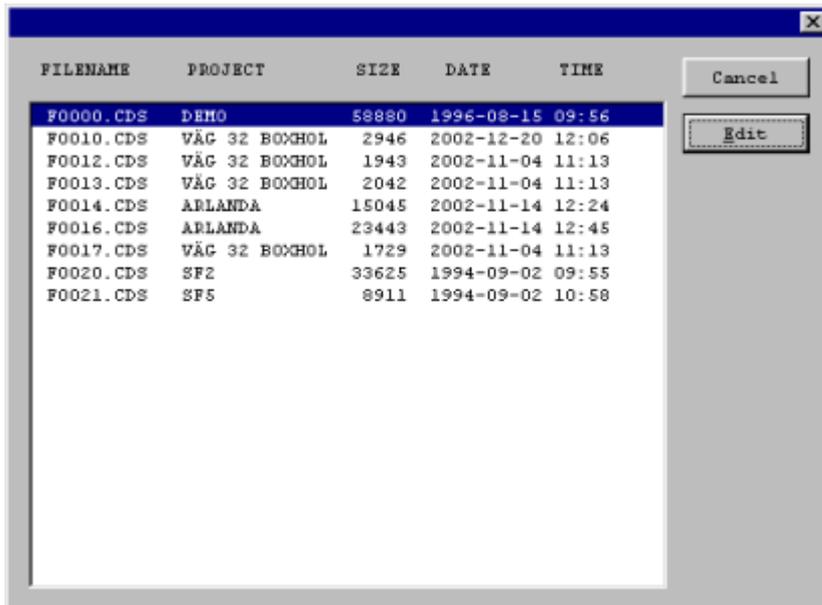
In connection with data entry into the **CDS**, certain items of information may have been entered incorrectly. For example, the wrong starting section may have been used, or an incorrect strip

direction in relation to the measurement of data for a particular length.

It may also be occasionally necessary to rename a project for a particular area, so as to leave it out from the **overview** picture, or to study it separately.

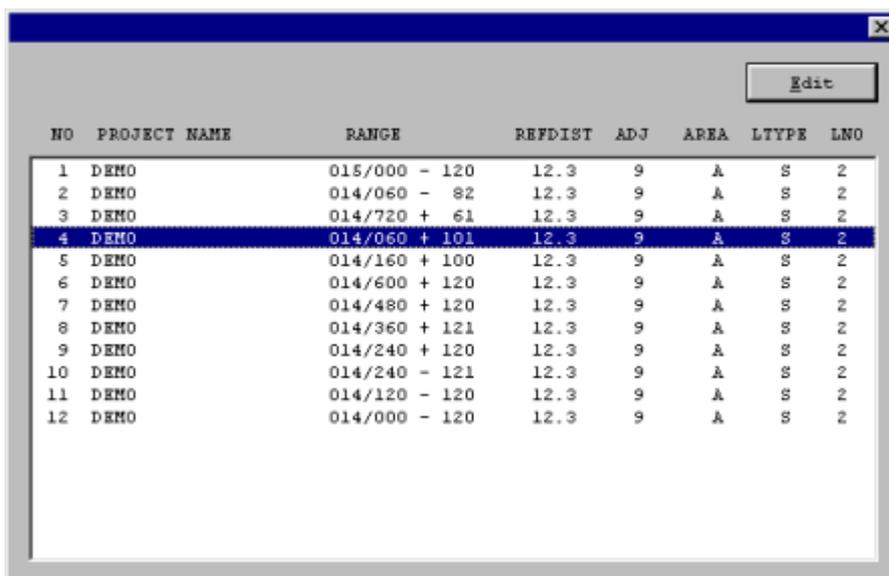
In other cases a certain area may have been recorded on more than one occasion under the same name. CdsView shows only the last area. One way to see the other areas is to rename them.

Select **Edit files** from the Transmission menu! A dialog then displays a list of all the files in the system.



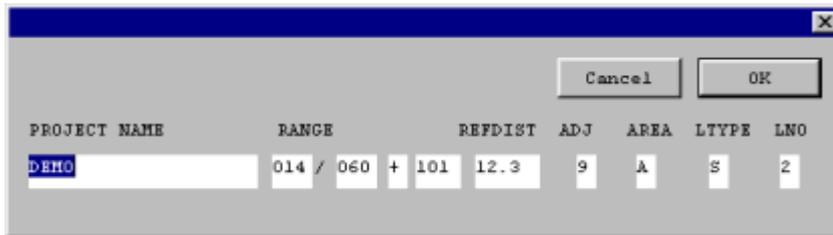
FILENAME	PROJECT	SIZE	DATE	TIME
F0000.CDS	DEMO	58880	1996-02-15	09:56
F0010.CDS	VÄG 32 BOMHOL	2946	2002-12-20	12:06
F0012.CDS	VÄG 32 BOMHOL	1943	2002-11-04	11:13
F0013.CDS	VÄG 32 BOMHOL	2042	2002-11-04	11:13
F0014.CDS	ARLANDA	15045	2002-11-14	12:24
F0016.CDS	ARLANDA	23443	2002-11-14	12:45
F0017.CDS	VÄG 32 BOMHOL	1729	2002-11-04	11:13
F0020.CDS	SF2	33625	1994-09-02	09:55
F0021.CDS	SF5	8911	1994-09-02	10:58

Select the file to be edited and then **Edit**. A table will be displayed on the screen as in the figure listing the areas contained in the selected file. Mark the area you want to edit and select **Edit**.



NO	PROJECT NAME	RANGE	REFDIST	ADJ	AREA	LTYPE	LNO
1	DEMO	015/000 - 120	12.3	9	A	S	2
2	DEMO	014/060 - 82	12.3	9	A	S	2
3	DEMO	014/720 + 61	12.3	9	A	S	2
4	DEMO	014/060 + 101	12.3	9	A	S	2
5	DEMO	014/160 + 100	12.3	9	A	S	2
6	DEMO	014/600 + 120	12.3	9	A	S	2
7	DEMO	014/480 + 120	12.3	9	A	S	2
8	DEMO	014/360 + 121	12.3	9	A	S	2
9	DEMO	014/240 + 120	12.3	9	A	S	2
10	DEMO	014/240 - 121	12.3	9	A	S	2
11	DEMO	014/120 - 120	12.3	9	A	S	2
12	DEMO	014/000 - 120	12.3	9	A	S	2

The fields that may be edited are shown in a separate dialog:

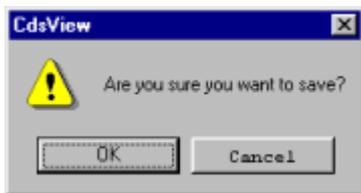


PROJECT NAME	RANGE	REFDIST	ADJ	AREA	LTYPE	LNO
DEMO	014 / 060 + 101	12.3	9	A	S	2

Buttons: Cancel, OK

Select the field that you want to edit - with the mouse or by pressing **TAB** or **Shift+TAB**. Write the new information.

Press **Enter** or select **OK** when you are done. The changes are confirmed or cancelled by choosing an option in the new dialog:



A data file that has been changed receives the current system date.

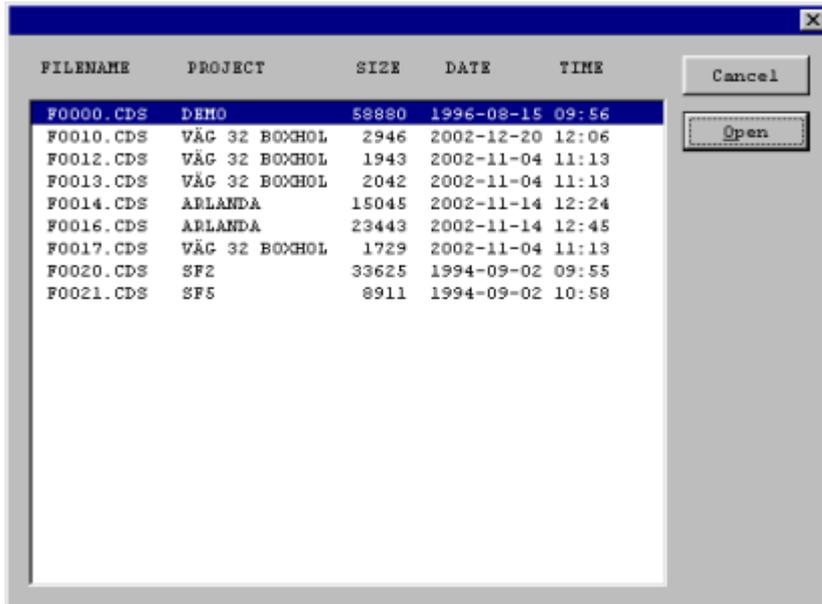
4.4.4 CCC-report

This function prints CDS reports on the PC printer.

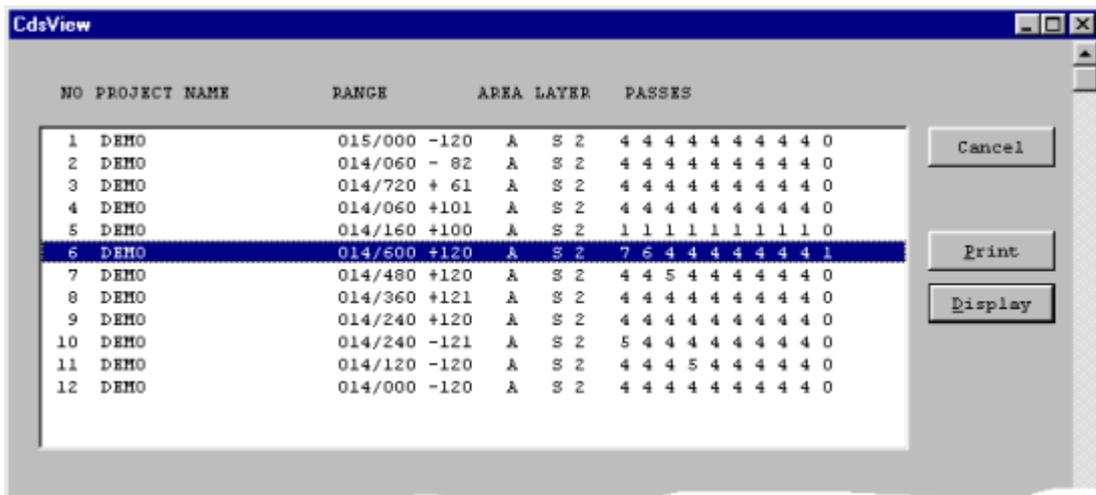
CDS has built in software and connections for a serial dot matrix printer or laser printer, but if you want to make printouts directly from the PC to a connected printer, then use this function.

Part of the CDS-software is included in the CdsView-program, so that the program can generate the CDS-documents in the PC and print them.

Select the option **CCC-report** in the **Transmission** menu. A dialog listing all CDS-files will appear:

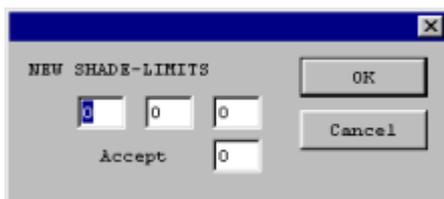


Select the file containing the areas you want to print and then **Open**. A new dialog will appear showing the areas with one line of text information for each area.



Select the area you wish to **Print** or **Display**. Several areas can also be marked for printing/display by holding down the **Ctrl-key** and highlighting them in turn.

Before the area(s) are printed/displayed you will have an opportunity to change the limits used for the bitmap in the CCC-report.



Select **OK** with zeros in all fields if you accept the shade limits used at the recording of the areas

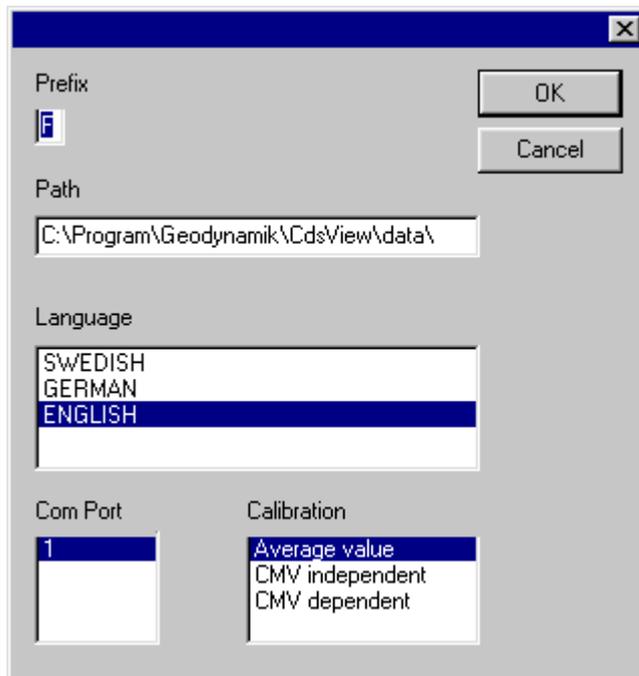
in CDS or change the numbers before selecting **OK**.

The area(s) will be printed or displayed below the text window. If many areas are displayed, you will have to scroll down to be able to see them.

4.5 Setup

In this section you can enter certain parameters that the program needs

- file prefix = first letter in datafile names
- data path = the folder where transferred datafiles will be stored
- language
- serial port for transfer from CDS
- calibration parameter for thr regression lines in calibration diagrams



Note! A change of **Language** will take effect next time CdsView is launched.

4.6 Exit

Exits CdsView and takes you back to Windows.

5 Summary of key sequences

5.1 Key sequences

Menus

Alternative ways to select a menu option:

- Select with the mouse
- Hold down the ALT key and press the letter key that has an underscore.

Marking of an area for zooming or a diagram

- Move the highlight with the →, ←, PgDn, PgUp, Home or End keys.
- Lock the starting position with the **space bar** or **period**.
- Move the highlight to the other end of the area to be selected.
- Press **Enter**.

Cursor lines in diagrams

Are moved with the →, ← (small steps) or Tab/ Shift+Tab or Ctrl+→ or ← (large steps).

6 Organizing Compaction Control

6.1 Planning

It is important that compaction work is planned in such a way that:

- control of compaction work with the help of CDS gives continuous and homogeneous results.
- the compaction strips should be chosen in such a way that they are univocally locatable.
- the beginning and ending points that are recorded in CDS agree with the physical locations.

The arrangement of compaction work is especially important when the compaction of different sections of an area occurs sometimes in a direction of increasing distance (positive direction) and sometimes in a decreasing direction (negative direction).

In order to identify later the location of a certain roller strip relative a given reference line, it is necessary to work systematically following a given scheme.

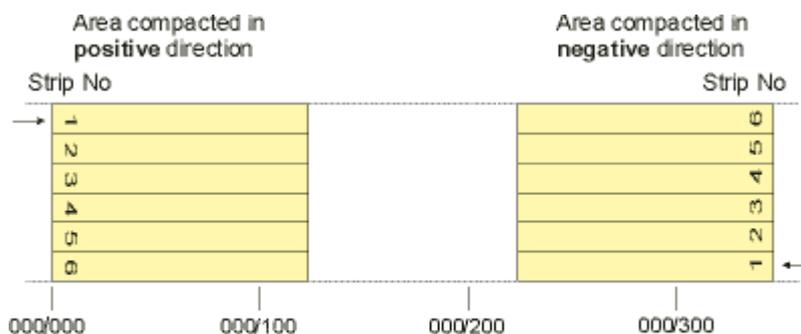
The compaction work should be planned in such a way that the roller driver in a natural way, and more or less automatically, sees to it that the recordings are correctly made.

During data acquisition, it is very important that there is always a correspondence between the picture on the CDS and the ground in front of the roller and that the movement of the roller symbol on the screen always corresponds to the roller's movement on the ground.

6.2 Recording with CDS

During data acquisition, it is very important that there is always a correspondence between the picture on the CDS and the ground in front of the roller and that the movement of the roller symbol on the screen always corresponds to the roller's movement on the ground.

A suggestion for a recommended arrangement is shown in this picture:



In this example **NO OF STRIPS** in CDS is equal to 6

In the example the left edge of the area is used as a reference line and the positive direction is towards the right.

For areas that are compacted in the positive direction, i.e. the first strip compacted in the direction of increasing distance, place strip number 1, in the CDS, on the left edge of the screen. Compact the other strips edge to edge so that the whole width is covered. In the example the area is wide enough to accommodate six strips.

The **effective strip width** depends on the width of the roller, and on the overlap used. Normally

you should anticipate 10-20 cm overlap.

On areas that are compacted in a "negative direction", strip number 1 should be placed in the same line as strip number 6 that is compacted in the "positive direction".

You can begin compaction along the reference line (the left edge seen in a positive direction), but then you must move to strip 6 with the help of the arrow keys on the CDS, and then, for each new strip, set the strip number in CDS with the arrow keys.

The parameter **NO OF STRIPS** in CDS is set to 6 in this example.

If for any reason you cannot compact right to the reference line, you must estimate the distance to the reference line measured in number of roller strips, and adjust the strip numbers in CDS accordingly.

Later when the data is transmitted to the PC and used by CdsView the strips can be adjusted so that adjacent strips appear adjacent to each other in the overview picture.

In CdsView you can select to have or not to have strip adjustment. If strip adjustment is selected, the strip numbering is altered in sections that are compacted in a negative direction. This alteration depends on the value entered in the No of strips menu in the CDS. In case the value entered in No of strips is incorrectly or not entered at all, the correct value can be entered with an editing routine located in CdsView's Transmission/Edit files menu

Index

- A -

area 14

- B -

baud 4

- C -

Calibration 15
 append 17
 contents 18
 diagram 19
 edit 17
 new 15
 recall 22
 remove 21

CD-drive 4

CDS 3

CDS-files 3

CdsView 3

CMV 3

Communication info 23

Compaction Documentation System 3

compaction meter 3

- D -

data path 28

default printer 4

demo data files 6

Density 15

diagram 12

- E -

Edit CDS-files 24

E-modulus 15

EV1 15

EV2 15

Exit 28

- F -

file contents 23

file prefix 28

- H -

Hard disk 4

- I -

installation 6

- L -

language 28

layer 14

Layer type 9

- M -

Main menu 8

matrix 14

monitor 4

- N -

Next 11

- O -

overview 10

- P -

PC 4

point control methods 15

Presentation 8

Prev 11

print CCC-report 26

print file contents 23

printer 4

project 10

Project name 9

- R -

reference value 14

regression line 19

Relative density 15

Running CdsView 6

- S -

section 12

security copy 6

serial port 4

Setup 28

statistical information 12

strip 12

strip adjustment 14

strip number 12

- T -

Transmission 22

Transmission from CDS 23

- U -

Using CdsView 8

- X -

XON/XOFF 4

- Z -

Zoom 11

zoom level 11