



XIII
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CONGRESS

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Québec 

SUSTAINABLE WINTER SERVICE FOR ROAD USERS

*Maintenance Contracts: Exchange of Data
between Contractor and Client*

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Statens vegvesen

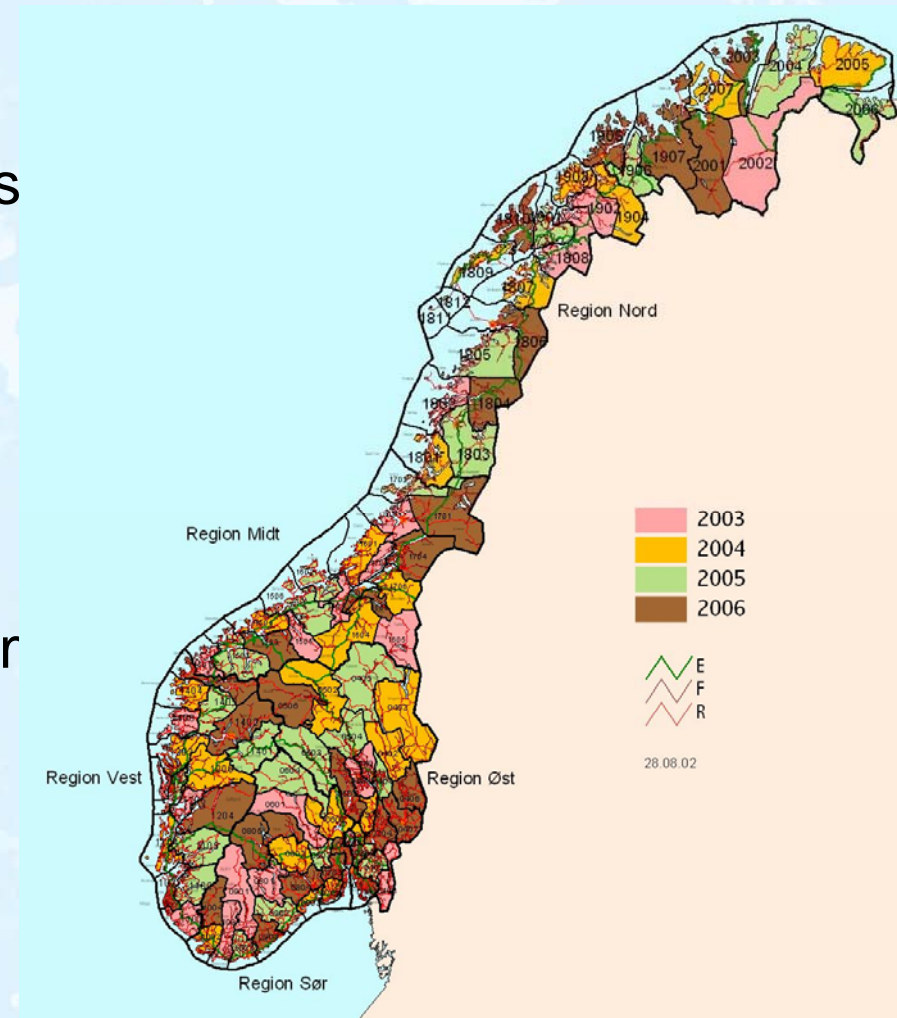
Maintenance Contracts: Exchange of Data between Contractor and Client

1. Introduction
2. Development of computerised system
3. Presentation of:
 - 3a. Client module
 - 3b. Contractor module
 - 3c. Module for technical inspection
 - 3d. Module for overview of personnel
4. Training for users

1. Introduction

Facts:

- In-house production ceased in 2003
- Production Division of NPRA was established as a state owned company
- Since 2003 all maintenance on tender
- 110 contracts
- Average length of contract 500 kr
- Duration of contracts 5 years
- Contracts cover all maintenance activities



2. Development of a computerised system

- Contracts are complicated for both contractor and client
- A lot of data will be exchanged between the parties
- Impossible to make use of data from 110 contracts without a computerised system
- Preliminary project started late 2005
- Used first time September 2007
- For all contracts 2010
- Project: All stakeholders in project group, i.e. from all five regions, contractors and consultants.
- Implementation: participation from stakeholders essential

2. Development of a computerised system, cont'd.

Purpose:

- To take care of all written material exchanged between contractor and client
- To establish a good way of managing contracts
- To ensure correct reporting from contractors
- To save time for both parties
- To have greater consistency in data for statistics (such as quantities of sand and NaCl)

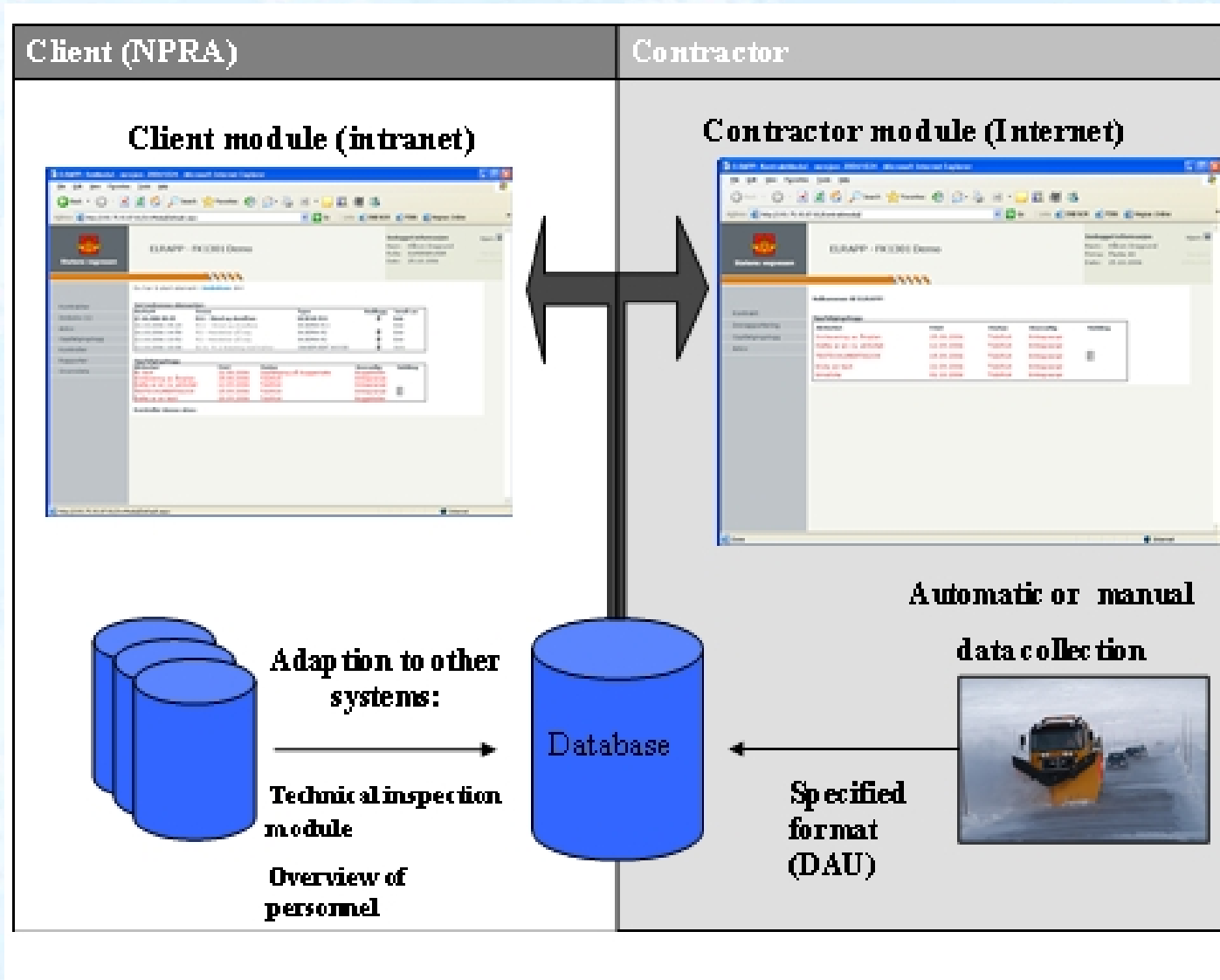
System is called ELRAPP – stands for ELectronic REPorting

3. Development of a computerised system, cont'd.

ELRAPP consists of four modules:

- 3a. Client module
- 3b. Contractor module
- 3c. Module for technical inspection
- 3d. Module for overview of personnel

3. Development of a computerised system, cont'd.



Schematic overview of flow of data

3a. Client Module

Purpose:

- For NPRA personnel (available on Intranet)
- The client's task at the start of each contract is:
 - to register each contract with specific data for that contract
 - to establish the road network for each contract
 - to list activities (may vary from one contract to another)
 - to list other formal/administrative requirements (so far 50 activities and 40 adm. requirements included)
 - to provide access to both client and contractor

3a. Client Module, cont'd.

Purpose, cont'd.:

- Takes care of reporting from contractors
- Special emphasis on winter activities (winter activities consists of more than half of total cost)
- Plan NPRA's own activities:
 - Random technical control (spot checks) of contractors
 - Contract meetings
- Provide data for reporting to Ministry of Transportation

3a. Client Module, cont'd.

Type of information:

- Contract data:
 - activities
 - adm. requirements
 - road network
- Mailbox
- Archive
- Statistics

The screenshot shows a Microsoft Word window titled 'Dokument1 - Microsoft Word' with a standard ribbon interface. The main content area displays a screenshot of a web browser window. The browser window is titled 'ELRAPP ByggherreModul - Windows Internet Explorer' and shows the URL 'http://elapp.nib.no/byggherre/Contract/Contract.aspx?anClass=kontrakt%26submenubar=Byggherre'. The web page content includes a header for 'Statens vegvesen' and 'ELRAPP - FK1406 HAFS 2007-2012'. A sidebar on the left lists navigation options like 'Kontrakter', 'Søk', and 'Ny kontrakt'. The main content area is titled 'Kontraktinformasjon' and contains a table of contract details. The table includes fields for 'Kontraktens navn', 'Tidperiode', 'Mal-versjon', 'SVEIS referanse', 'Møderapportering', 'Entreprenør', 'Kontaktperson', 'Telefon', 'Telefax', 'E-post entreprenør', 'Byggherre', and 'Byggleder'. The bottom of the screenshot shows the Windows taskbar with various open applications and the system clock at 10:49.

Kontraktinformasjon	
Entreprenør:	Kolo Vedekve AS
Kontaktperson:	Stue Jacobsen
Telefon:	
Telefax:	
E-post entreprenør:	stue.jacobsen@vedekve.no
Byggherre:	Statens vegvesen Region Vest
Byggleder:	Grethe D. Raineberg
Telefon:	
Telefax:	
E-post byggleder:	grethe.raineberg@vegvesen.no

3b. Contractor Module

Purpose:

- Used by contractors to report to and to receive messages from the client
- Only access to own contract
- Available on Internet
- Mostly performance based activities, i.e. the contractor must monitor the road network
- Report of:

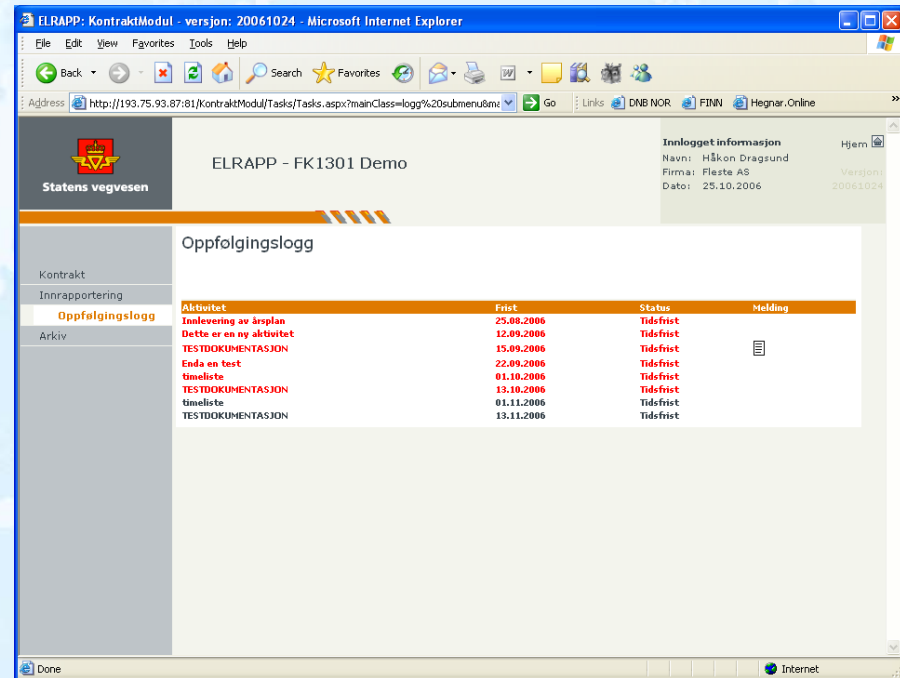
Incidents

Accidents causing damage to road objects

Quantities (NaCl, other gritting material, to be reported either automatically or manually)

3b. Contractor Module, cont'd.

- Time for reporting:
As required in the contract
(if too late, that requirement will turn in colour from black to **red**)
- Incidents as they occur



The screenshot shows a web browser window titled "ELRAPP: KontraktModul - versjon: 20061024 - Microsoft Internet Explorer". The address bar shows the URL: <http://193.75.93.87:81/KontraktModul/Tasks/Tasks.aspx?mainClass=logg%20submenu&nc>. The page content includes a header with the Norwegian coat of arms and the text "Statens vegvesen" and "ELRAPP - FK1301 Demo". On the right, there is a section for "Innlogget informasjon" (Logged in information) with details: "Navn: Håkon Draglund", "Firma: Fleste AS", "Dato: 25.10.2006", and "Versjon: 20061024". The main content area is titled "Oppfølgingslogg" (Tracking log) and contains a table with the following data:

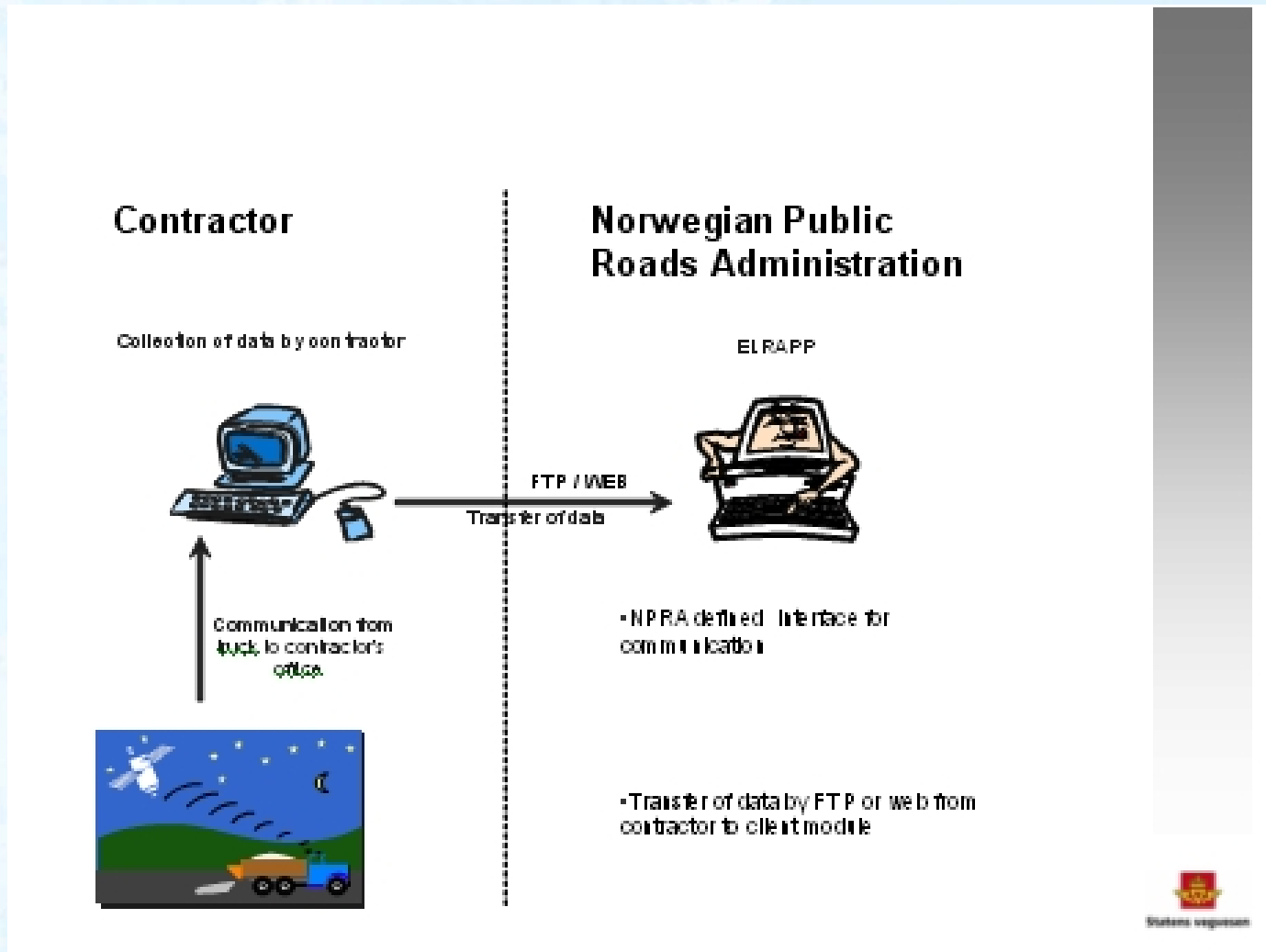
Aktivitet	Frist	Status	Melding
Innlevering av årsplan	25.09.2006	Tidsfrist	
Delte ar en ny arbeidsbet	12.09.2006	Tidsfrist	
TESTDOKUMENTASJON	15.09.2006	Tidsfrist	
Enda en test	22.09.2006	Tidsfrist	
timeliste	01.10.2006	Tidsfrist	
TESTDOKUMENTASJON	13.10.2006	Tidsfrist	
timeliste	01.11.2006	Tidsfrist	
TESTDOKUMENTASJON	13.11.2006	Tidsfrist	

3b. Contractor Module, cont'd.

- If requirements are not met, the contractor will be penalized.
- Defects beyond the control of the contractor will not be penalized.
- Standard deductions start at NOK 10.000 (€1.230). Max. has been NOK 200.000 (€24.600).



3b. Contractor Module, cont'd.

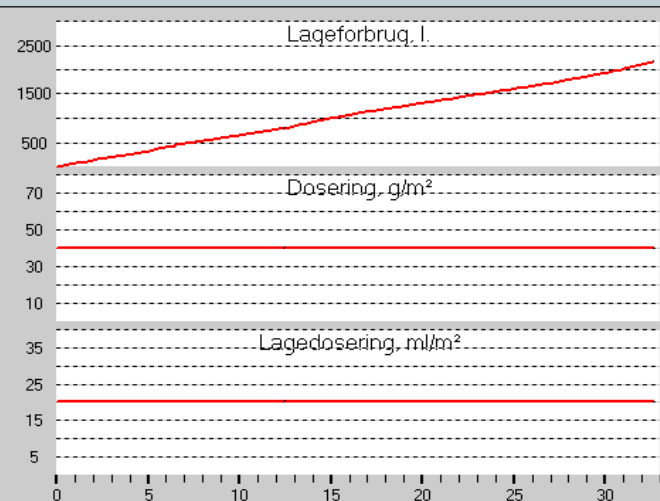
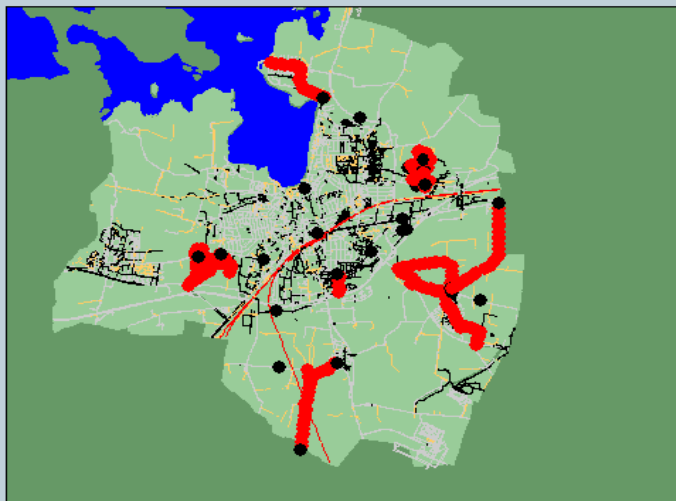


Schematic overview of flow of data for automatic registration of quantities

Vinterman Light - Præsentation af dataopsamling

Opsætning Aktiviteter Stamdata Hjælp Meldinger

VINTERCOM aktiviteter Data om en aktivitet Præsentation af dataops.



Side: Første 1 2 3 4 5 6 7 -> Næste 10 Sidste (57)

Tidspunkt iflg. køretøj	Aktion	Hast. km/h	Kørt km	Aktiv km	Bredde m	Symmetri m	Tørstof kg	Væske l	Vejtemp C
15-03-2005 04:27		0	0	0	6		0	0	
15-03-2005 04:31		0	0	0	6		0	0	
15-03-2005 04:37		0	0	0	6		0	0	
15-03-2005 04:38	20,0 ml	14	0	0	6		0	0	
15-03-2005 04:38	20,0 ml	17	0,1	0	4		0	3	
15-03-2005 04:39	20,0 ml	39	0,2	0	4		0	10	

Fundet: 337:

6

Side: Første 1 2 3 4 5 6 7 -> Næste 10 Sidste (57)

[Gem tabelopsætning permanent] [Vælg/fravælg kolonner]

Done

Statistical data

Defects

Quantities (automatic or manual reporting)

3c. Module for Technical Inspection

Spot checks of road network acc. to plan which specifies:

- name of inspector

- roads to be inspected

- activities to be inspected

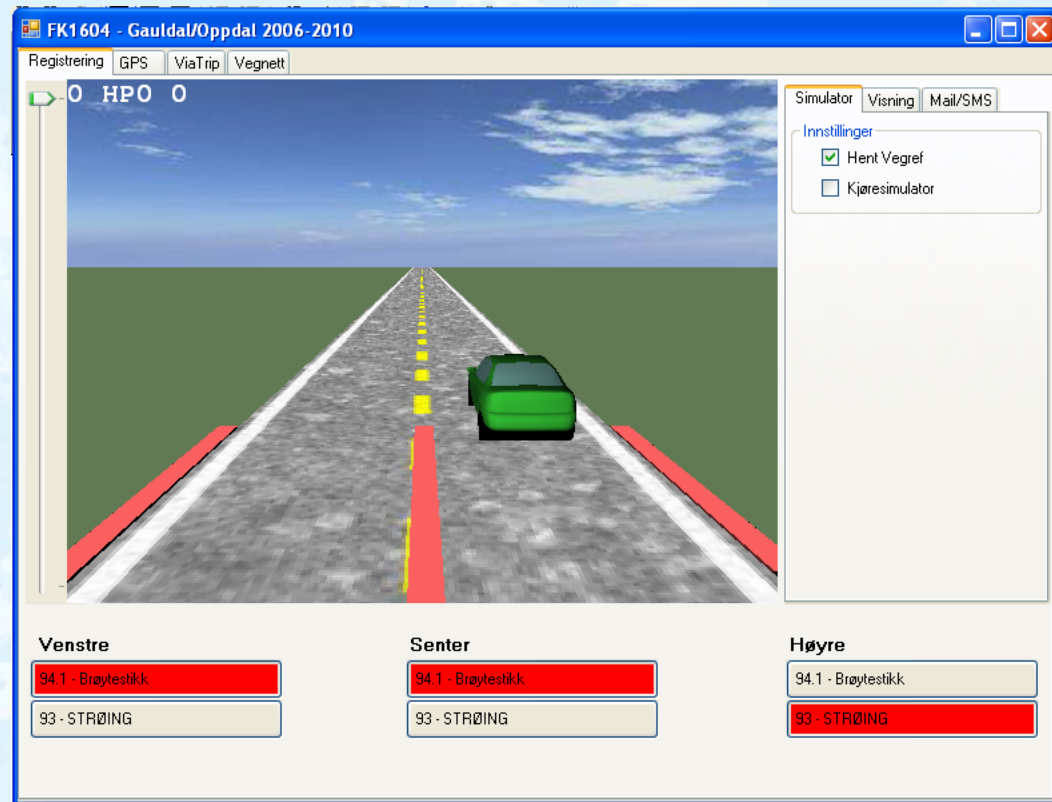
Daily inspection is the responsibility of the contractor.

Planning done in Client Module. This is transferred to the PC/WAP of the inspector.

3c. Module for Technical Inspection, cont'd.

Check of activities:

- Left – center – right
- Between 2 and 5 activities
- **Red** if not acc. to requirements
- Record while driving or later
- Traffic safety !



3c. Module for Technical Inspection, cont'd.

Defects will be registered and transferred to the Client Module after inspection.

Photos and technical reports can be added.

Good documentation of defects important when discussing with the contractor.



3d. Module for Overview of Personnel

- A requirement from the Government to report all personnel working on each contract each day.
- Used on all types of contracts, not only Maintenance Contracts.
- Separate module not connected to the other modules.
- The purpose is to prevent tax evasion.



Statens vegvesen

Oversiktslister

Innlogget informasjon

Kontrakt: Eksempel

Bruker: 2250

Dato: 28.05.2007

[Endre Passord](#)[?](#) [Utskrift](#)

Oversiktslister Meny

Registrer
underentreprenør

Registrer mannskap

Oversiktslister

Samlelister

HMS-Dokumenter

Kontrakt dato 28.05.2007

Velg kontraktstype:

Funksjonskontrakt

Velg kontrakt:

2250 - Eksempel

Velg entreprenør:

Vegvedlikehold AS

mai 2007						
ma	ti	on	to	fr	lø	sø
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Etternavn	Fornavn	Fødselsdato	Nasjonalitet	Registrert
Gundersen	Einar	21.12.1982	NO	
Hagen	Rud	23.01.1956	NO	
Hansen	Olav	31.12.1956	NO	
hansen	Ole	01.01.0200	DK	
✓ Leland	Torgeir	01.01.1950	NO	28.05.2007 16:06:03
Myhre	Mattis	02.04.1980	NO	
olsen	ole	01.01.1980	NO	
Seim	Kjell	01.01.1955	NO	
shdshdghs	dhd	12.12.1962	NO	
Smeland	Magne	01.01.1949	NO	
Østensvig	Knut	12.08.1945	NO	
Ås	Peder	12.12.1962	NO	

4. Training for users

- NPRA provides training for both in-house personnel and contractors. Both parties are required to attend.
- Users Manual is available on Internet (in Norwegian).
- Each of our five regions have appointed specialists to serve their region. Similar for contractors.

4. Training for users, cont'd.

NPRA's homepage for ELRAPP: www.vegvesen.no/elrapp

ELRAPP - vegvesen.no - Windows Internet Explorer

http://www.vegvesen.no/Fag/Veg+og+gate/Drift+og+vedlikehold/ELRAPP

Statens vegvesen

Standard kontrast | Skriftstørrelse A A A | English | Norsk

Fag

Hovedside Trafikkinformasjon Kjøretøy Førerkort Vegprosjekter **Fag** Jobb Om Statens vegvesen

Hovedside / Fag / Drift og vedlikehold / ELRAPP

ELRAPP

Arbeidsvarsling

Elektrokontrakter

Funksjonskontrakter

Vedlikehold av vegdekke

ELRAPP

Byggherre

Kontroll

Entreprenør

Automatisk dataopsamling

Oversiktslister

Vinterdrift

ELRAPP skal sikre en effektiv oppfølging av oppgavene i drift- og vedlikeholdskontrakter med funksjonsansvar (funksjonskontrakter).

- Etablere et godt styringssystem for SVV sine byggeledere for oppfølging av entreprenører og SVV sine egne aktiviteter.
- Sikre korrekt innrapportering fra entreprenørene og forbedre innrapporteringsmulighetene i forhold til dagens løsning ved å gå over til elektronisk rapportering der det er hensiktsmessig.
- Kvalitetssikre administrasjon, oppfølging og kontroll av funksjonskontrakter.
- Sikre arbeidsbesparende dokumentbehandling.
- Sikre et konsistent datagrunnlag for statistikk, blant annet ved å bedre innsamlingen av mengdeinformasjon fra aktivitetene på veien (salt, sand etc.).

Målsætningen er å etablere et system som er effektiviserende både for byggherrens og entreprenørens arbeid.

Last ned

2009-09-09 - Håndbok ELRAPP

Last ned

Entreprenørkurs 2009 - Formål med kurset og hvorfor ELRAPP.pdf

Entreprenørkurs 2009 - Hva er ELRAPP.pdf

Entreprenørkurs 2009 - Elektronisk datainnsamling - DAU.pdf

Bvøkerkurs 2009 Giennomgaa

Fullført

Klarerte områder

100 %

Challenges

- The objective is simplification of daily routines
- "Sell" the system to users in a positive manner
- Participation in all stages
- Good routines, training, user manual
- Quick response when questions
- Low entry level

Thank
you!

