



## Data Transmission System - DTS

The Aviation Industry requires more and more documentation for all safety related actions. This certainly also applies to de-icing/anti-icing operations.

With the Vestergaard data transmission system, the DTS, it is possible to record, document and process information on performed de-icing/anti-icing operations. The DTS may assist in this in basically any required form or format to meet the customers' specific demands.

In the most basic form, fluid selection and consumption are recorded and can be documented on a print-out (by truck-mounted printer). Further

the de-icing truck(s) may be linked with a central computer by cell phone (GPRS) technology.

The operator's panel is located in either the spray cabin or the chassis cabin of the truck. It consists of a touch-screen interface, enabling the operator to record a number of data in addition to the de-icing data, such as aircraft reg.no., flight no., operator etc. After completed operation, this data is stored in the safe Vestergaard Company A/S Hosted Web Server.

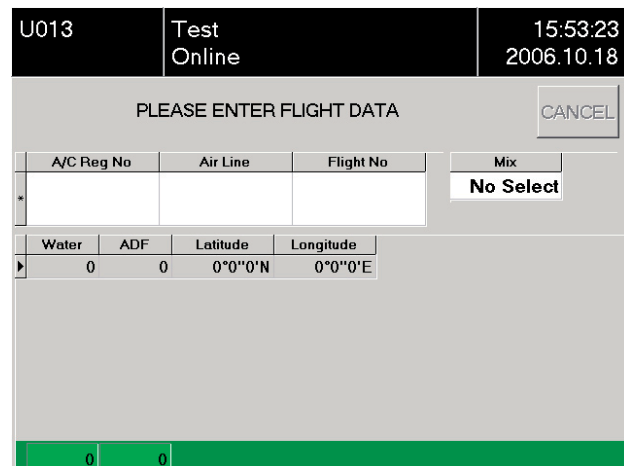
The DTS system can be expanded with modules enabling the de-icing coordinator to use the system for unit allocation purposes, and/or to feed the

system with information from the airport dispatch system.

At Vestergaard we particular configure the DTS to suit your requirements. Let us know, and we will propose the Data Transmission you need, in any language required.

### MAJOR ADVANTAGES

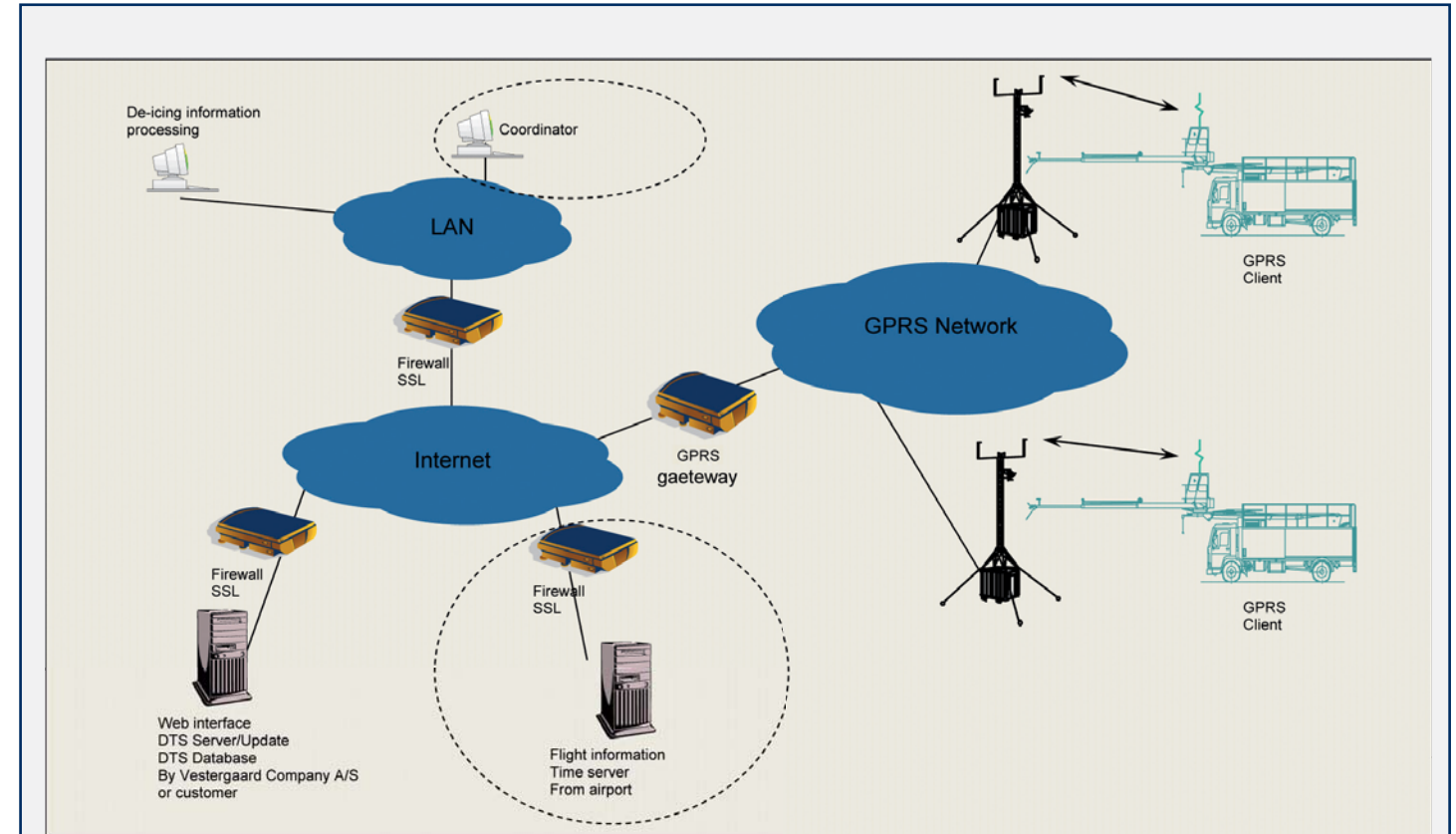
- Easy-to-use interface
- Traceability
- Flexible module system
- Documentation
- GPRS technology – independent of airport infrastructure



Screen dump from touch screen in the spray cabin



Touch screen mounted in spraying cabin.



Network Configuration

### Specifications:

**Quad-band GSM/GPRS modem**  
Compatible with the various 850/900/1800/1900MHz frequencies of cellular networks across the globe.

**GPS receiver:**  
SiRF III High Sensitivity GPS Receiver

**Web server:**  
Secure Hosting centre.  
Backbone Internet access with 1Gbit  
Mirrored Blade server  
SAN disk storage.



## Hosted Web Server

Via a safe internet connection, access can be achieved to the Vestergaard Company A/S Hosted Web Server. The server is Physically placed at a safe place in Denmark, and back-up of critical data is performed continuously.

Vast arrays of features are available on the web site, and navigation is logical, fast and simple



**Web DTS**  
Online management for Vestergaard Data Transmission Systems

Logout | User Data | DTS Users | DTS Clients | DTS Jobs

User List  
User Login | User Name

Add New User

User Login:   
User Name:  Update

Only authorized persons can access the secured data on the web server. An authorized logon, automatically takes you to the continuously updated DTS job page (One operation for one unit creates a DTS record).

WebDTS 2.1 - Online management for Vestergaard Data Transmission Systems  
RELATED SITES: Vestergaard Company  
Statistics Specification Reports Service Administration News

### Job Table

Rec No	Unit No	User Login	Airline	Flight No	Job Start Time	Job Complete Time	Hot Time	Water	Type I	Type IV	Fluid Count
0	1	12760	VC	636	2008-12-02 07:07:40	2008-12-02 07:12:08	2009-01-21 09:35:40	227	0	232	4
1	3	12570	VC	636	2008-12-02 07:06:57	2008-12-02 07:11:54	2009-01-21 09:35:07	216	0	193	6
2	6	3510	VC	1618	2008-12-02 06:55:32	2008-12-02 06:57:47	2009-01-21 09:22:51	22	23	0	1
3	3	12570	VC	1618	2008-12-02 06:55:18	2008-12-02 06:55:47	2009-01-21 09:22:38	36	28	0	1
4	11	4880	LZ	1955	2008-12-02 06:51:18	2008-12-02 07:00:03	2009-01-21 09:19:49	447	0	149	8
5	3	12570	VC	79	2008-12-02 06:46:37	2008-12-02 06:47:24	2009-01-21 09:13:57	28	23	58	2
6	4	12760	VC	1190	2008-12-02 06:39:29	2008-12-02 06:45:35	2009-01-21 09:07:43	303	0	170	5
7	3	12570	VC	1190	2008-12-02 06:39:03	2008-12-02 06:44:34	2009-01-21 09:07:11	293	43	197	8
8	7	20858	UU	8762	2008-12-02 06:01:44	2008-12-02 06:07:06	2009-01-21 08:29:35	187	46	108	5
9	6	3510	UU	8762	2008-12-02 06:01:43	2008-12-02 06:06:55	2009-01-21 08:29:46	262	45	153	7
10	7	20858	SS	5113	2008-12-02 05:30:24	2008-12-02 05:34:50	2009-01-21 07:58:13	172	38	162	5
11	8	3510	VC	5113	2008-12-02 05:30:22	2008-12-02 05:35:11	2009-01-21 07:58:35	253	37	172	7
12	12	20339	RT	570	2008-12-02 05:18:35	2008-12-02 05:32:17	2009-01-21 07:50:06	479	54	239	7
13	8	20860	VC	1880	2008-12-02 05:17:17	2008-12-02 05:25:56	2009-01-21 07:45:42	380	0	238	6
14	9	415784	VC	1880	2008-12-02 05:17:16	2008-12-02 05:24:57	2009-01-21 07:46:15	385	0	229	6

Job Table:  
Each activity per connected deicing unit is listed on this page. By clicking on unit number, user login number, airline, flight number or unit count will generate a detailed list of the relevant parameters respectively.

WebDTS 2.1 - Online management for Vestergaard Data Transmission Systems  
RELATED SITES: Vestergaard Company  
Log Out Live Data DTS Jobs Summary Statistics Specification Reports Service Administration News

### Flight Summary

Unit No:  Reg No:  Airline:  Flight No:  Job Time:  Hours Before:  Hours After:  Lookup

Unit No	User Login	Airline	Flight No	Job Start Time	Job Complete Time	Hot Time	Water	Type I	Type IV	Create Time
7	20858	UU	8762	2008-12-02 06:01:44	2008-12-02 06:07:06	2009-01-21 08:29:35	187	46	108	2008-12-02 06:05:36
6	3510	UU	8762	2008-12-02 06:01:43	2008-12-02 06:06:55	2009-01-21 08:29:46	262	45	153	2008-12-02 06:05:42
<b>Summary:</b>				2008-12-02 06:01:43	2008-12-02 06:07:06		449	91	261	

### Fluid Data

Rec No	Unit No	StartTime	StopTime	Alarm	Mix	Water	Type I	Type IV	Create Time
0	6	2008-12-02 06:01:44	2008-12-02 06:02:26		D Water	118	0	0	2008-12-02 06:04:49
1	7	2008-12-02 06:01:46	2008-12-02 06:02:15		D Water	106	0	0	2008-12-02 06:04:59
2	7	2008-12-02 06:02:15	2008-12-02 06:03:45		A Type IV	0	0	69	2008-12-02 06:05:07
3	6	2008-12-02 06:02:26	2008-12-02 06:03:48		A Type IV	0	0	77	2008-12-02 06:04:56
4	7	2008-12-02 06:03:45	2008-12-02 06:04:27		A 40%	49	34	0	2008-12-02 06:05:14
5	6	2008-12-02 06:03:48	2008-12-02 06:04:29		A 40%	48	33	0	2008-12-02 06:05:04
6	7	2008-12-02 06:04:27	2008-12-02 06:04:41		D Water	20	0	0	2008-12-02 06:05:21
7	6	2008-12-02 06:04:29	2008-12-02 06:04:55		D Water	58	0	0	2008-12-02 06:05:11
8	7	2008-12-02 06:04:41	2008-12-02 06:07:06		A Type IV	0	0	27	2008-12-02 06:05:28
9	6	2008-12-02 06:04:55	2008-12-02 06:05:17		A Type IV	0	0	29	2008-12-02 06:05:19
10	6	2008-12-02 06:05:17	2008-12-02 06:05:37		D Water	26	0	0	2008-12-02 06:05:26
11	6	2008-12-02 06:05:37	2008-12-02 06:06:55		A Type IV	0	0	35	2008-12-02 06:05:33

Detailed operation reports:  
Clicking on any flight number automatically generates all activity reports related to this specific operation. Detailed reports on each single fluid and/or fluid mixture sprayed on the aircraft is listed, and so is the total operation time and fluid consumption.

## WebDTS 2.1 - Online management for Vestergaard

Log Out Live Data DTS Jobs Summary Statistics Specification

WebDTS 2.1 - Online management for Vestergaard Data Transmission Systems  
RELATED SITES: Vestergaard Company

Group by Date  
Group by Unit  
Group by User  
Group by Airline

Date	Job Count	User Count	Unit Count	Water	Water pr. Job	Type I	Type IV pr. Job	Type IV	Type IV pr. Job	Operationtime	Operationtime pr. Job
2008-11-14	33	12	9	5272	159	5405	163	0	0	00:02:52:00	00:00:05:12
2008-11-13	201	20	12	56946	283	25405	126	13432	66	00:21:09:56	00:00:06:19
2008-11-12	113	19	12	115516	1,022	26,166	231	1,312	11	00:20:32:29	00:00:10:54
2008-11-11	156	25	13	72409	464	23,626	151	18,233	116	00:22:01:03	00:00:08:28
2008-11-02	4	2	2	5272	146	429	107	0	0	00:02:52:00	00:00:05:12
2008-11-01	12	3	8	56946	44	447	37	17	1	00:21:09:56	00:00:06:19
<b>Summary</b>	<b>741</b>			<b>291105</b>	<b>(392.9)</b>	<b>118581</b>	<b>(160.0)</b>	<b>33286</b>	<b>(44.9)</b>	<b>03:13:25:27</b>	<b>(00:00:06:55)</b>

Statistics:  
Statistics can be filtered as per request and specification, grouped: Periodically, Per unit, Per customer, Per operator.

DTS AIRLINE  
we collect your data

### Statistic - Group by Date

Period Start: 2008-11-01 Period End: 2008-11-15

Date	Job Count	User Count	Unit Count	Water	Water pr. Job	Type I	Type IV pr. Job	Type IV	Type IV pr. Job	Operationtime	Operationtime pr. Job
2008-11-14	33	12	9	5,272	159	5,405	163	0	0	00:02:52:00	00:00:05:12
2008-11-13	201	20	12	56,946	283	25,405	126	13,432	66	00:21:09:56	00:00:06:19
2008-11-12	113	19	12	115,516	1,022	26,166	231	1,312	11	00:20:32:29	00:00:10:54
2008-11-11	156	25	13	72,409	464	23,626	151	18,233	116	00:22:01:03	00:00:08:28
2008-11-10	46	11	8	6,918	150	6,329	137	0	0	00:03:34:15	00:00:04:39
2008-11-09	119	20	11	21,541	181	22,060	185	0	0	00:07:50:54	00:00:03:57
2008-11-08	18	5	4	3,175	176	2,995	166	0	0	00:01:54:38	00:00:06:22
2008-11-07	8	4	2	1,155	144	853	106	0	0	00:00:49:45	00:00:06:13
2008-11-06	4	3	3	736	184	560	140	0	0	00:00:26:41	00:00:06:40
2008-11-05	5	5	4	2,337	292	1,681	210	0	0	00:01:15:02	00:00:09:22
2008-11-04	8	7	6	1,063	135	797	99	0	0	00:00:34:28	00:00:04:16
2008-11-03	11	7	4	2,869	263	1,828	166	252	26	00:01:40:34	00:00:09:08
2008-11-02	4	2	2	587	146	429	107	0	0	00:00:19:47	00:00:04:56
2008-11-01	12	3	8	531	44	447	37	17	1	00:00:23:47	00:00:01:58
<b>Summary</b>	<b>741</b>			<b>291,105</b>	<b>(393)</b>	<b>118,581</b>	<b>(160)</b>	<b>33,286</b>	<b>(45)</b>	<b>03:13:25:27</b>	<b>(00:00:06:55)</b>

PDF

## WebDTS 2.1 - Online management

Log Out Live Data DTS Jobs Summary S

Client List  
Live Map  
Coordinator

Live map:  
GPS technology allows tracing individual deicers in the airport.

Export Scheduler

Export Filter

Start Date: 2009-03-25 00:00  
End Date: 2009-03-25 08:26

Export New Export All Export Filtered

Data export:  
PDF files can be generated from all lists on the web site. Data can likewise be exported in Excel format for further processing (e.g. invoicing). Export parameters can as per request include, all data, new records (generated since last export), or data in specific periods.