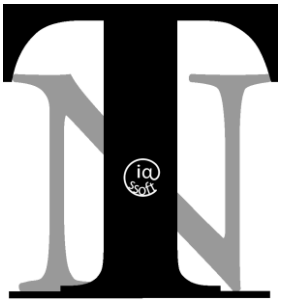
IASSOFT Ltd

***I**ndustrial **A**utomation **S**ystems and **SOFT**ware*



Truckman.Net

Short Description

Grigoris Tziallas

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1. Software overview

Truckman.NET is a terminal automation system for monitoring, controlling and managing the truck loading process in oil terminals. **Truckman.NET** is an upgrade of the TruckManager software and is currently installed and operating at several oil terminals.

Truckman.NET consists of the following basic subsystems:

- Loading management system
- Isle automation system

and the following optional subsystems:

- Additives subsystem
- Interface to SAP
- Tank Gauging Software
- SCADA subsystem for monitoring and control of station pumps and valves.
- Terminal gate and truck weighing
- Deliveries and customs clearance
- Central monitoring and control

1.1 Loading management system

The Loading management system provides the following basic functionality for managing the truck loading process:

- Entry and management of loading orders
- Printing of loading orders
- Print out of bill of lading. The bill of lading is customizable according to user requirements
- Configuration of LCUs and system parameters
- Management of products and additives
- Management of truck driver database
- Management of companies database
- Management of trucks and compartments database
- Management of users and access levels

- Daily reports, balances and access to historical data
- Management of users

1.2 Isle Automation System

The Isle Automation System provides the basic functionality for automating and supervising the truck loading process. The Isle Automation System has the following characteristics:

- Supports loading isles of either bottom loading or top loading with LCUs such as Accuload II, Accuload III, Masterload II, Petrocount, ISOIL VEGA and Contrec.
- Controls truck driver access to loading Isles and entry of fuel quantities. An optional interface with Badge Reader Systems can be used for truck driver access.
- Provides a graphical overview (mimic diagram) of isles and trucks
- Provides an Emergency Shut Down (ESB) and LCU disable function
- Alarm logging and handling
- Event logging and printing
- Automated self checks of loading data consistency (constant cross check of totalizers and bills of lading)
- Detailed reports and statistics

1.3 Additives Subsystem

- Additive management
- Additive automation

1.4 Interface to SAP

- Import of loading orders from SAP
- Export of loading data to SAP

1.5 Tank gauging software

- Interface with tank gauging system hardware (e.g. ENRAF) for on-line monitoring and display of tank levels, temperatures, densities and water levels
- Calculated Gross, Net and weight values of products in tanks based on tank strap tables
- Monitoring and handling of High, High-High, Low and Low-Low level alarms
- Graphical display (mimic diagram) of terminal tanks.
- Historical data base of tank measurements
- Trend charts of tank measurements
- Data reconciliation of measured and expected quantities based on delivery protocols and loading data

1.6 SCADA subsystem

SCADA subsystem for monitoring and control of station pumps and valves:

- Overall station mimic display
- Automated startup and shutdown of product pumps based on current and expected loading orders
- Remote control of pumps and valves
- Interlocks
- Event and alarm monitoring
- User customizable station configuration

1.7 Terminal gate and truck loading

- Registration of truck's arrival and departure times
- Entry and exit weighing
- Checking of actual weight against expected tare and gross weight from loading data.

1.8 Delivery and customs clearance

- Management of terminal fuel tanks
- Entry and management of product delivery protocols
- Entry and management of customs clearance operations
- Product inventories and management of product surpluses or deficits
- Management and reporting on stocks and available quantities
- Checks of loading orders against available quantities

1.9 Central monitoring and control

Centralized access to the oil terminal operations from the company head offices. In detail, the head offices have access to the following data:

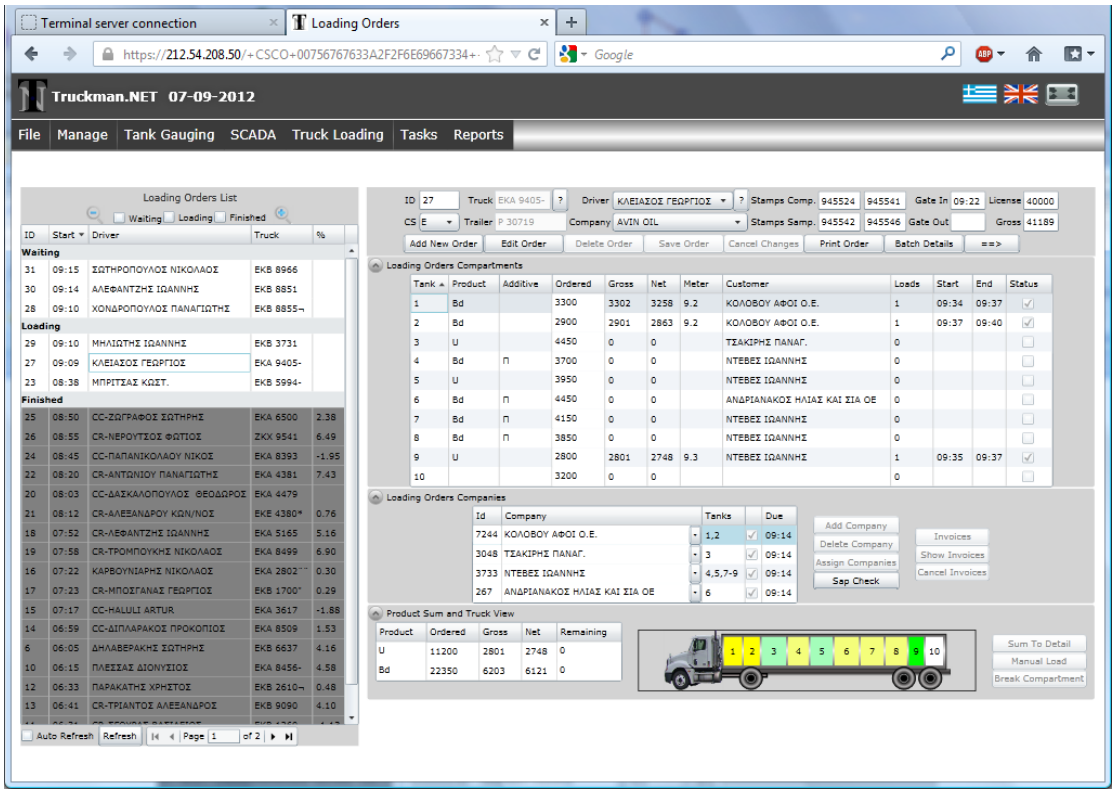
- LCU start and end totalizers
- Daily deliveries and loadings rundown
- Modifications of oil terminal LCU parameters
- Totalizer continuity cross check
- Alarm monitoring and handling

1.10 Other features

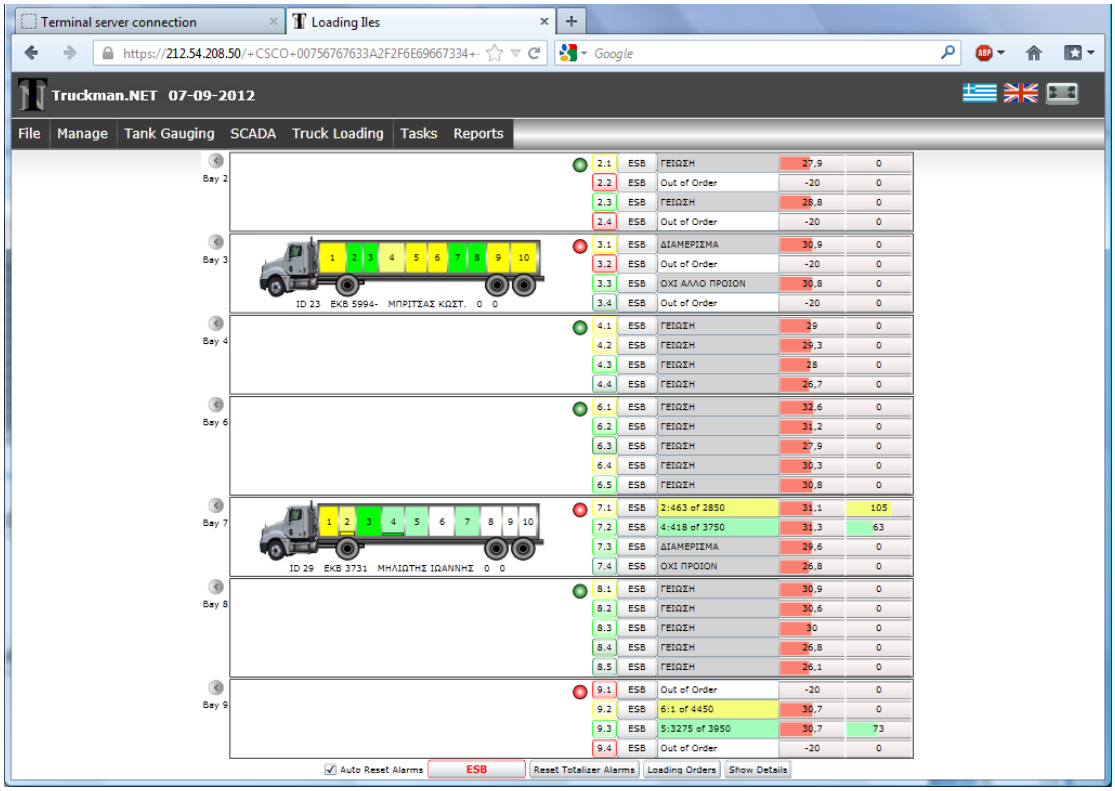
- Interface with electronic weighing system
- Interface with badge readers
- Truck driver information panel
- Database mirroring and back up
- Interface with MS Excel for statistical analysis

Sample Screens and Forms

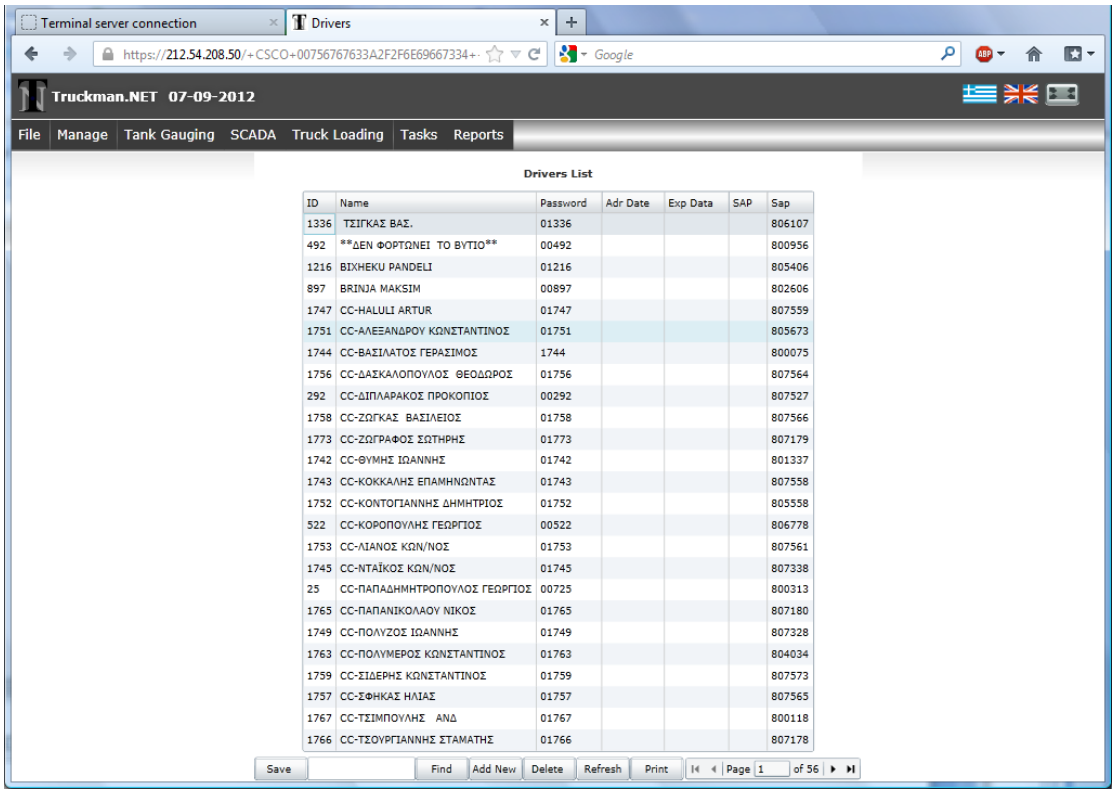
Loading Orders Form



Loading Isles Mimic Display

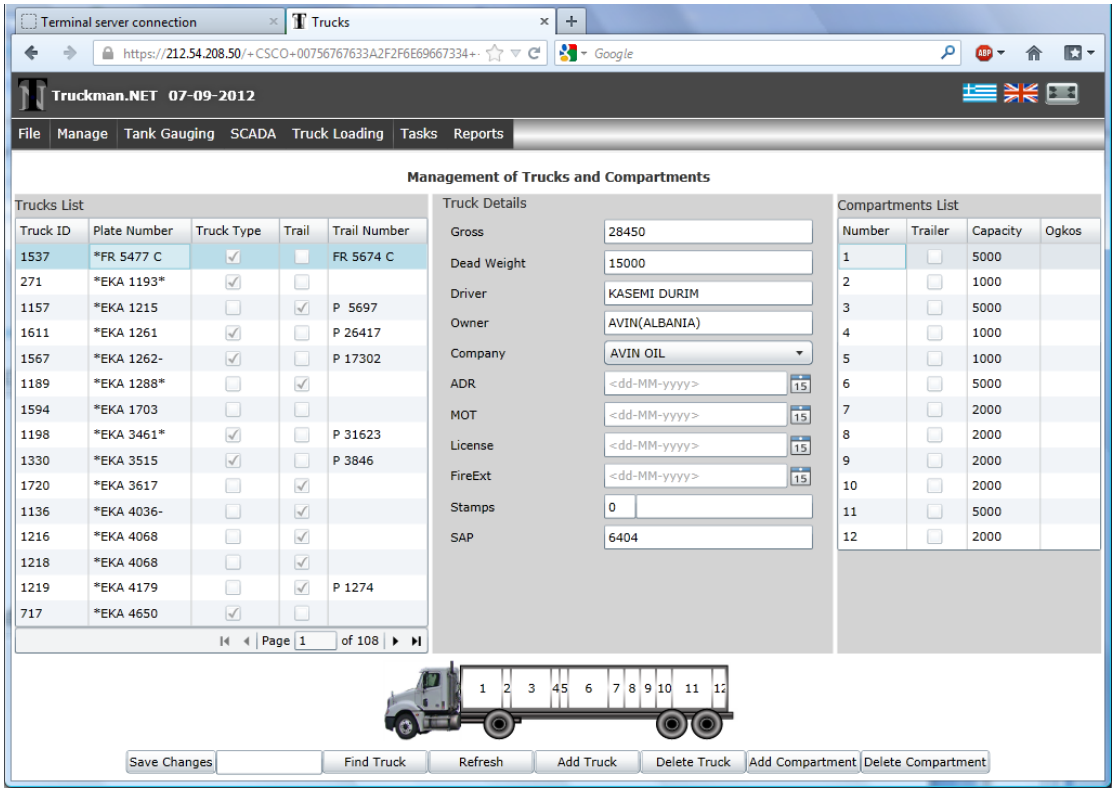


Drivers Form



ID	Name	Password	Adr Date	Exp Data	SAP	Sap
1336	ΤΣΙΓΚΑΣ ΒΑΣ.	01336				806107
492	**ΔΕΝ ΦΟΡΤΩΝΕΙ ΤΟ ΒΥΤΙΟ**	00492				800956
1216	BIXHEKU PANDELI	01216				805406
897	BRINJA MAKSIM	00897				802606
1747	CC-HALULI ARTUR	01747				807559
1751	CC-ΑΛΕΞΑΝΔΡΟΥ ΚΩΝΣΤΑΝΤΙΝΟΣ	01751				805673
1744	CC-ΒΑΣΙΛΑΤΟΣ ΓΕΡΑΣΙΜΟΣ	1744				800075
1756	CC-ΔΑΣΚΑΛΟΠΟΥΛΟΣ ΘΕΟΔΩΡΟΣ	01756				807564
292	CC-ΔΙΠΛΑΡΑΚΟΣ ΠΡΟΚΟΠΙΟΣ	00292				807527
1758	CC-ΖΩΓΚΑΣ ΒΑΣΙΛΕΙΟΣ	01758				807566
1773	CC-ΖΩΓΡΑΦΟΣ ΣΩΤΗΡΗΣ	01773				807179
1742	CC-ΘΥΜΗΣ ΙΩΑΝΝΗΣ	01742				801337
1743	CC-ΚΟΚΚΑΛΗΣ ΕΠΑΜΗΝΩΝΤΑΣ	01743				807558
1752	CC-ΚΟΝΤΟΓΙΑΝΝΗΣ ΔΗΜΗΤΡΙΟΣ	01752				805558
522	CC-ΚΟΡΟΠΟΥΛΗΣ ΓΕΩΡΓΙΟΣ	00522				806778
1753	CC-ΛΙΑΝΟΣ ΚΩΝ/ΝΟΣ	01753				807561
1745	CC-ΝΤΑΪΚΟΣ ΚΩΝ/ΝΟΣ	01745				807338
25	CC-ΠΑΠΑΔΗΜΗΤΡΟΠΟΥΛΟΣ ΓΕΩΡΓΙΟΣ	00725				800313
1765	CC-ΠΑΠΑΝΙΚΟΛΑΟΥ ΝΙΚΟΣ	01765				807180
1749	CC-ΠΟΛΥΖΟΣ ΙΩΑΝΝΗΣ	01749				807328
1763	CC-ΠΟΛΥΜΕΡΟΣ ΚΩΝΣΤΑΝΤΙΝΟΣ	01763				804034
1759	CC-ΣΙΔΕΡΗΣ ΚΩΝΣΤΑΝΤΙΝΟΣ	01759				807573
1757	CC-ΣΦΗΚΑΣ ΗΛΙΑΣ	01757				807565
1767	CC-ΤΣΙΜΠΟΥΛΗΣ ΑΝΔ	01767				800118
1766	CC-ΤΣΟΥΡΓΙΑΝΝΗΣ ΣΤΑΜΑΤΗΣ	01766				807178

Trucks Form

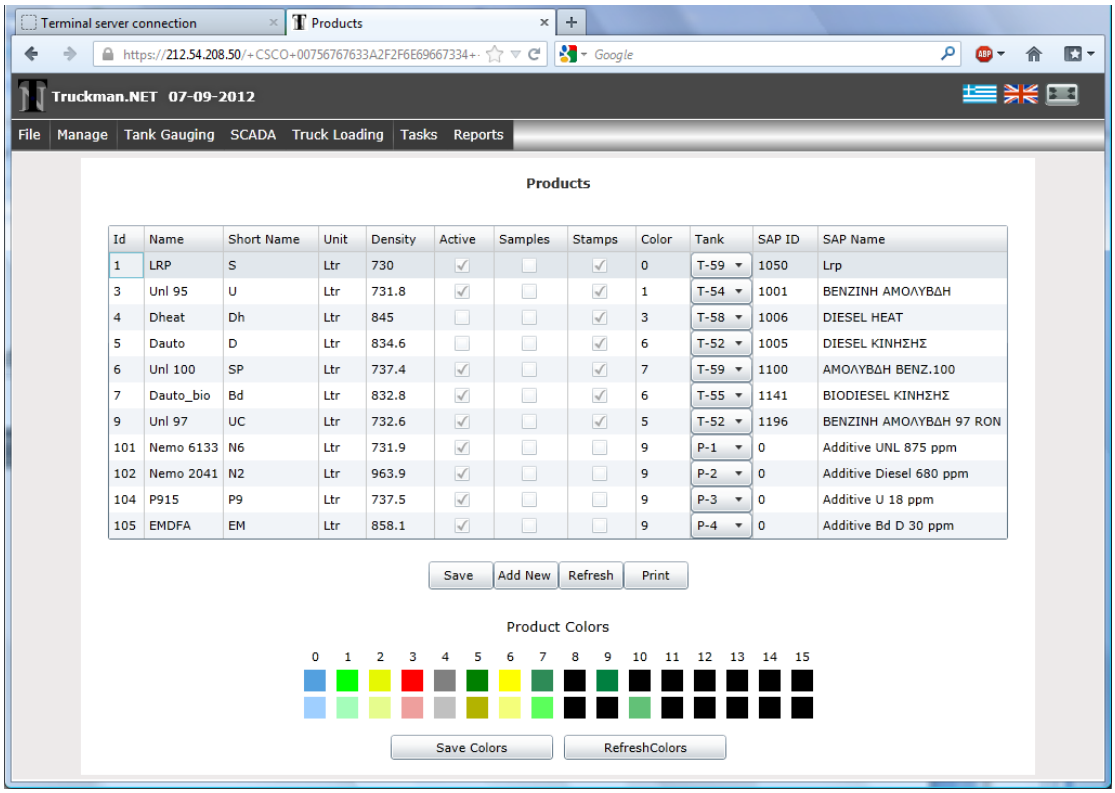


Truck ID	Plate Number	Truck Type	Trail	Trail Number
1537	*FR 5477 C	☑	☐	FR 5674 C
271	*EKA 1193*	☑	☐	
1157	*EKA 1215	☐	☑	P 5697
1611	*EKA 1261	☑	☐	P 26417
1567	*EKA 1262-	☑	☐	P 17302
1189	*EKA 1288*	☐	☑	
1594	*EKA 1703	☐	☐	
1198	*EKA 3461*	☑	☐	P 31623
1330	*EKA 3515	☑	☐	P 3846
1720	*EKA 3617	☐	☑	
1136	*EKA 4036-	☐	☑	
1216	*EKA 4068	☐	☑	
1218	*EKA 4068	☐	☑	
1219	*EKA 4179	☐	☑	P 1274
717	*EKA 4650	☑	☐	

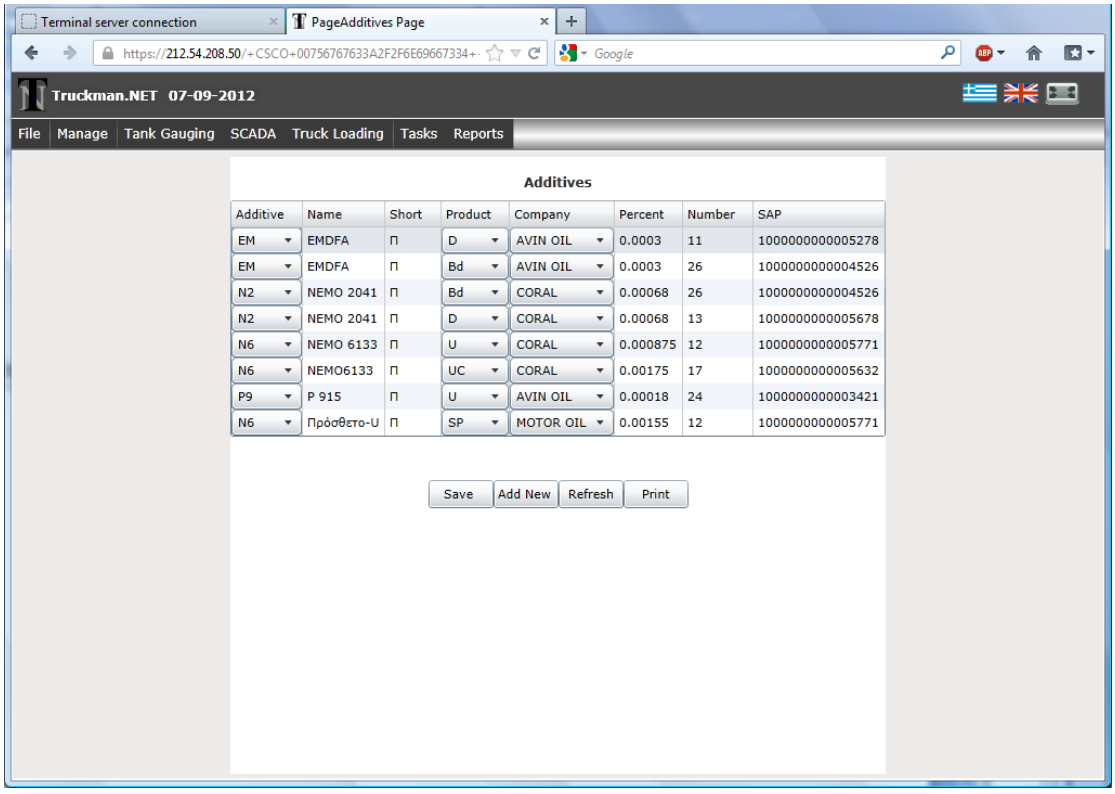
Gross	28450
Dead Weight	15000
Driver	KASEMI DURIM
Owner	AVIN(ALBANIA)
Company	AVIN OIL
ADR	<dd-MM-yyyy>
MOT	<dd-MM-yyyy>
License	<dd-MM-yyyy>
FireExt	<dd-MM-yyyy>
Stamps	0
SAP	6404

Number	Trailer	Capacity	Ogkos
1	☐	5000	
2	☐	1000	
3	☐	5000	
4	☐	1000	
5	☐	1000	
6	☐	5000	
7	☐	2000	
8	☐	2000	
9	☐	2000	
10	☐	2000	
11	☐	5000	
12	☐	2000	

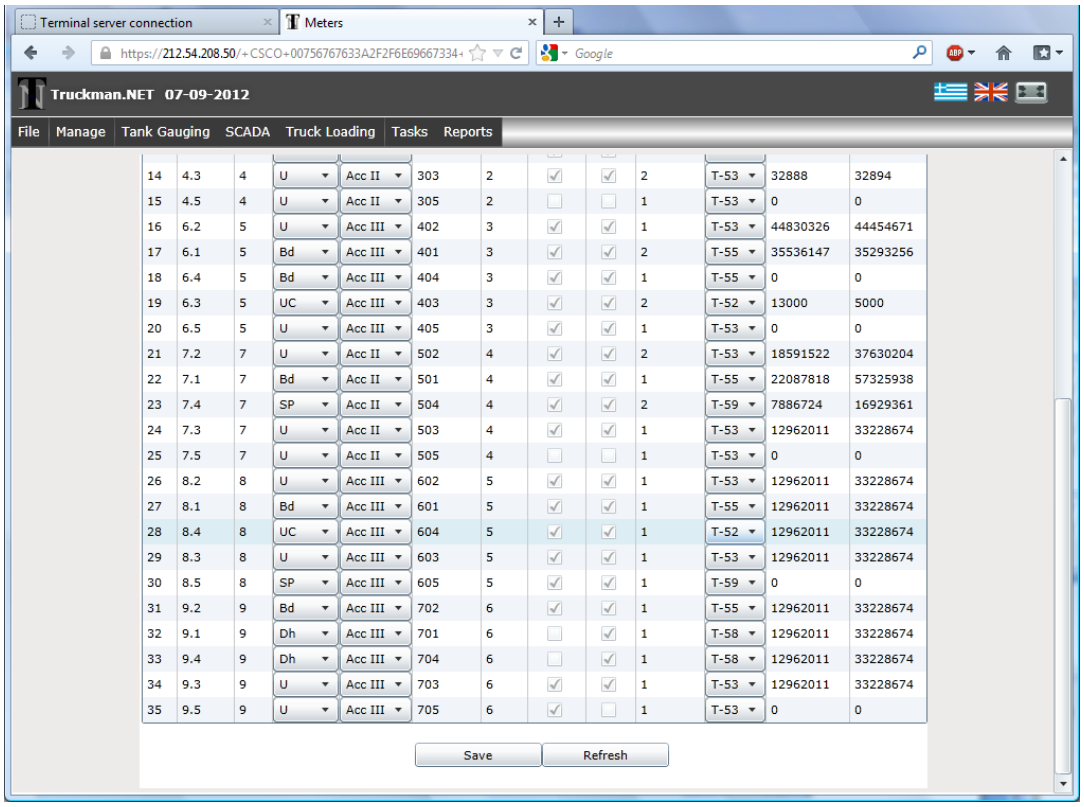
Products Form



Additives Form

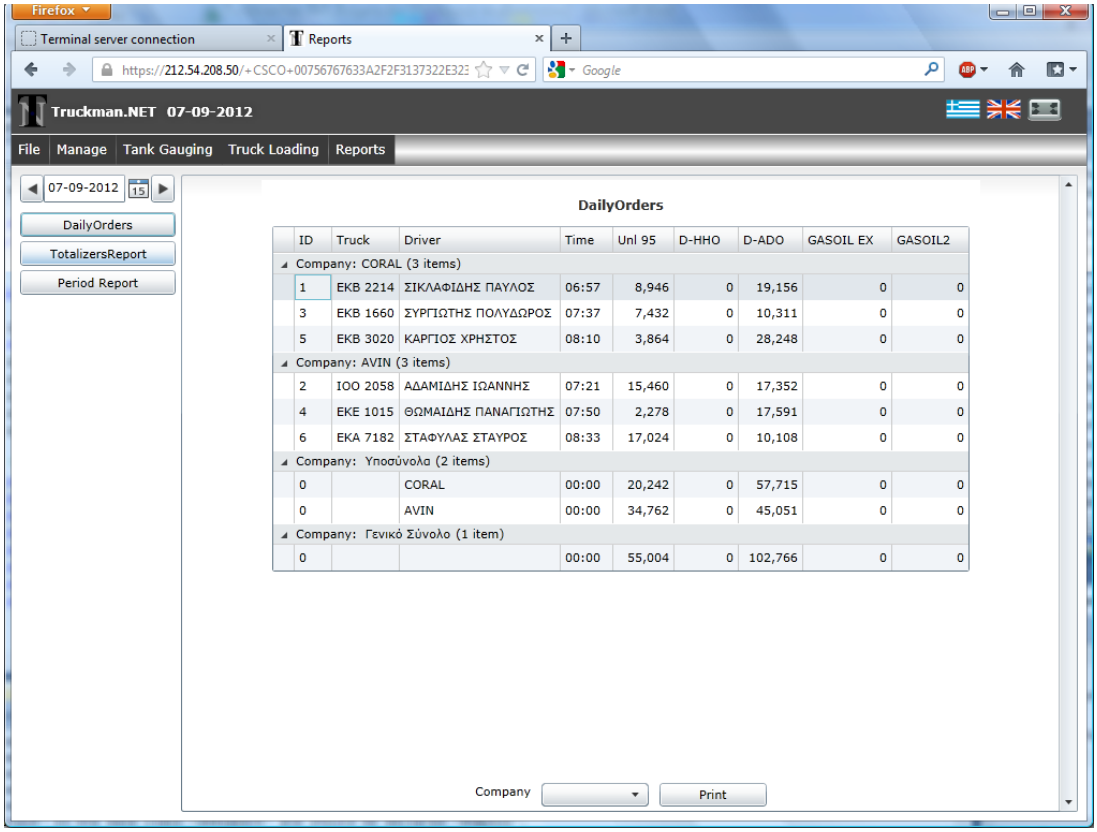


LCUs Form



14	4.3	4	U	Acc II	303	2	☑	☑	2	T-53	32888	32894
15	4.5	4	U	Acc II	305	2	☐	☐	1	T-53	0	0
16	6.2	5	U	Acc III	402	3	☑	☑	1	T-53	44830326	44454671
17	6.1	5	Bd	Acc III	401	3	☑	☑	2	T-55	35536147	35293256
18	6.4	5	Bd	Acc III	404	3	☑	☑	1	T-55	0	0
19	6.3	5	UC	Acc III	403	3	☑	☑	2	T-52	13000	5000
20	6.5	5	U	Acc III	405	3	☑	☑	1	T-53	0	0
21	7.2	7	U	Acc II	502	4	☑	☑	2	T-53	18591522	37630204
22	7.1	7	Bd	Acc II	501	4	☑	☑	1	T-55	22087818	57325938
23	7.4	7	SP	Acc II	504	4	☑	☑	2	T-59	7886724	16929361
24	7.3	7	U	Acc II	503	4	☑	☑	1	T-53	12962011	33228674
25	7.5	7	U	Acc II	505	4	☐	☐	1	T-53	0	0
26	8.2	8	U	Acc III	602	5	☑	☑	1	T-53	12962011	33228674
27	8.1	8	Bd	Acc III	601	5	☑	☑	1	T-55	12962011	33228674
28	8.4	8	UC	Acc III	604	5	☑	☑	1	T-52	12962011	33228674
29	8.3	8	U	Acc III	603	5	☑	☑	1	T-53	12962011	33228674
30	8.5	8	SP	Acc III	605	5	☑	☑	1	T-59	0	0
31	9.2	9	Bd	Acc III	702	6	☑	☑	1	T-55	12962011	33228674
32	9.1	9	Dh	Acc III	701	6	☐	☑	1	T-58	12962011	33228674
33	9.4	9	Dh	Acc III	704	6	☐	☑	1	T-58	12962011	33228674
34	9.3	9	U	Acc III	703	6	☑	☑	1	T-53	12962011	33228674
35	9.5	9	U	Acc III	705	6	☑	☐	1	T-53	0	0

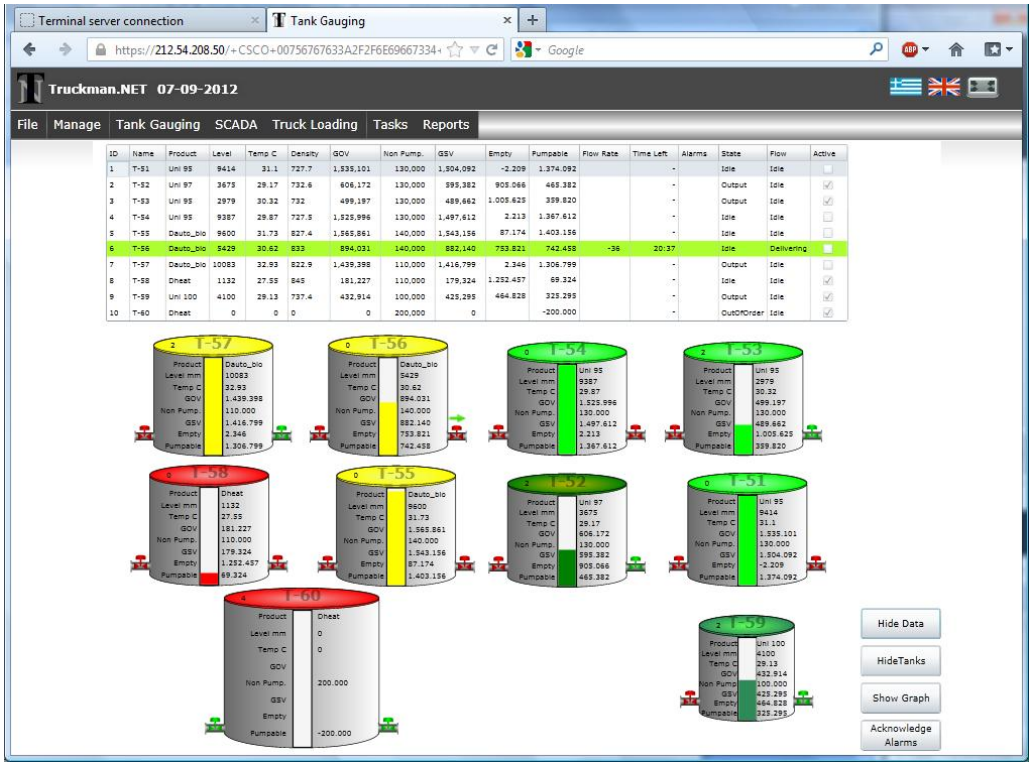
Reports Form



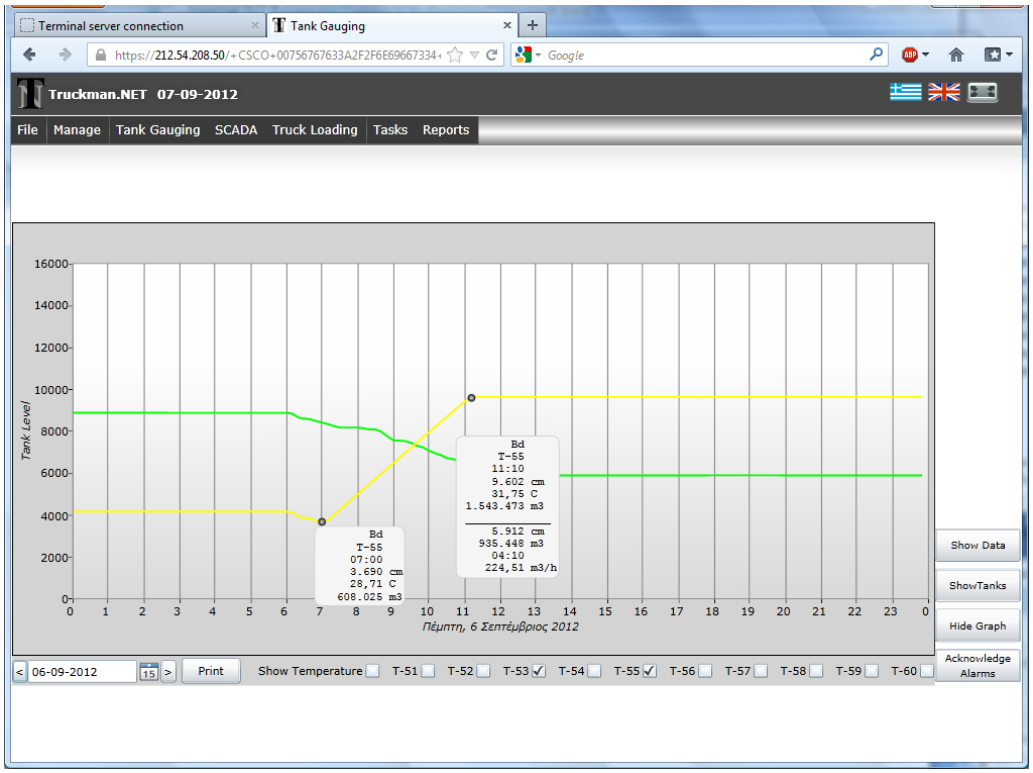
ID	Truck	Driver	Time	Unl 95	D-HHO	D-ADO	GASOIL EX	GASOIL2
Company: CORAL (3 items)								
1	ΕΚΒ 2214	ΣΙΚΛΑΦΙΔΗΣ ΠΑΥΛΟΣ	06:57	8,946	0	19,156	0	0
3	ΕΚΒ 1660	ΣΥΡΓΙΩΤΗΣ ΠΟΛΥΔΩΡΟΣ	07:37	7,432	0	10,311	0	0
5	ΕΚΒ 3020	ΚΑΡΓΙΟΣ ΧΡΗΣΤΟΣ	08:10	3,864	0	28,248	0	0
Company: AVIN (3 items)								
2	ΙΟΟ 2058	ΑΔΑΜΙΔΗΣ ΙΩΑΝΝΗΣ	07:21	15,460	0	17,352	0	0
4	ΕΚΕ 1015	ΘΩΜΑΙΔΗΣ ΠΑΝΑΓΙΩΤΗΣ	07:50	2,278	0	17,591	0	0
6	ΕΚΑ 7182	ΣΤΑΦΥΛΑΣ ΣΤΑΥΡΟΣ	08:33	17,024	0	10,108	0	0
Company: Υποσύνολα (2 items)								
0		CORAL	00:00	20,242	0	57,715	0	0
0		AVIN	00:00	34,762	0	45,051	0	0
Company: Γενικό Σύνολο (1 item)								
0			00:00	55,004	0	102,766	0	0

Tank Gauging Subsystem

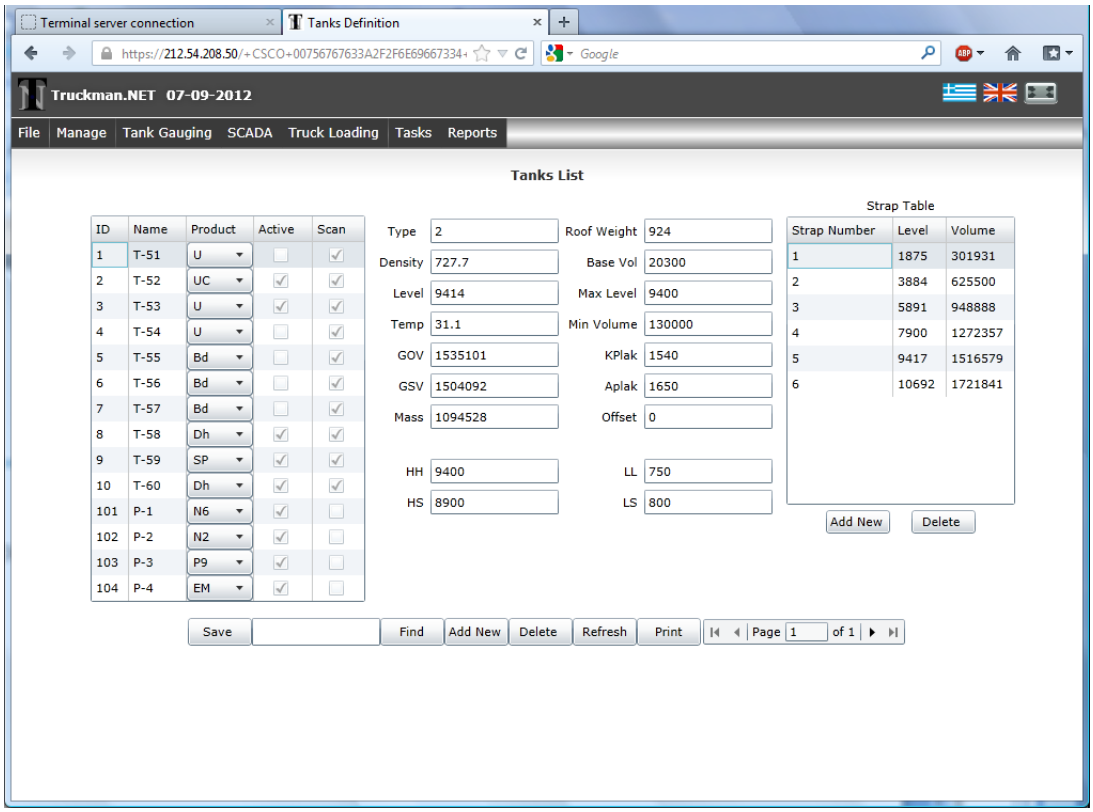
Tank Mimic Display



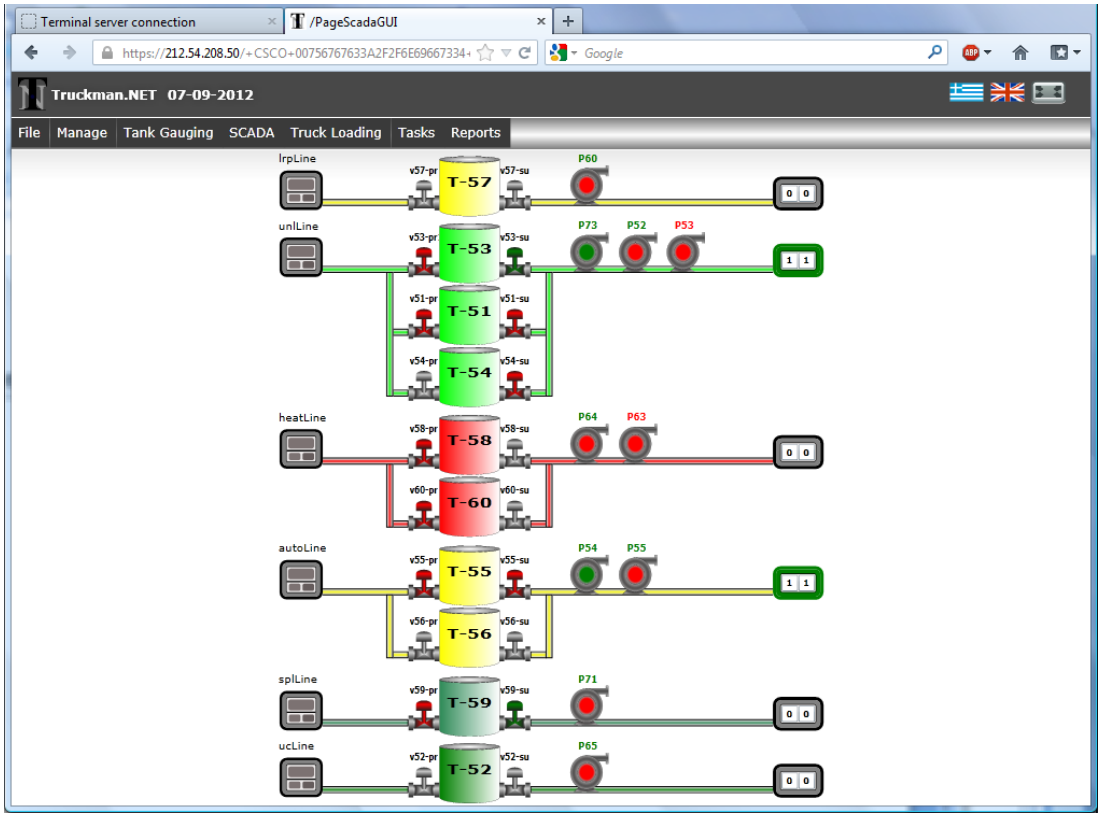
Tank Graphs



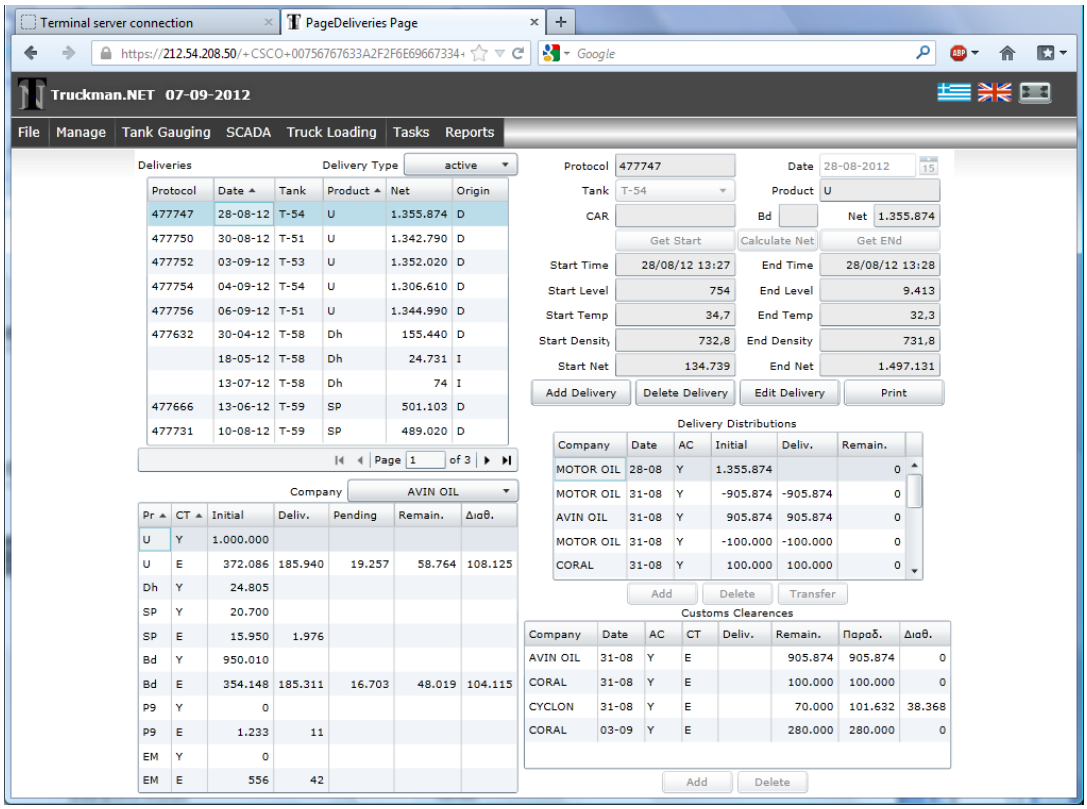
Tank Definition and Strap Table



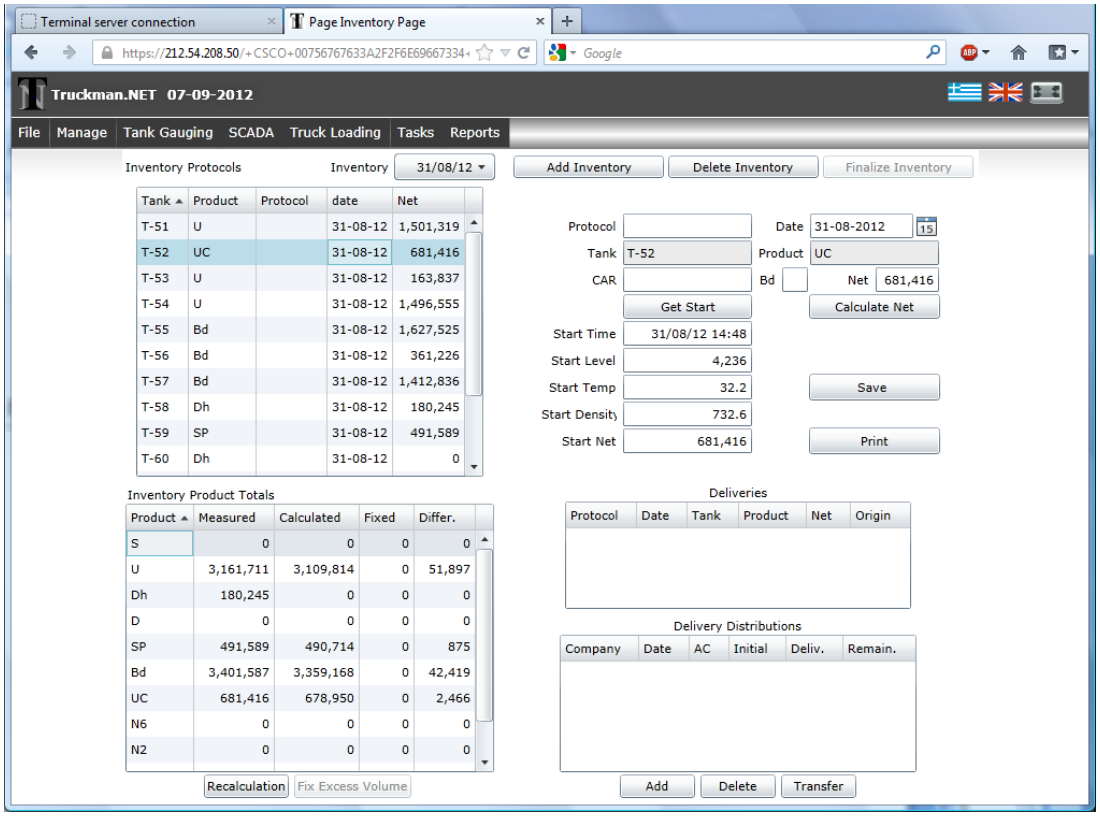
SCADA Subsystem



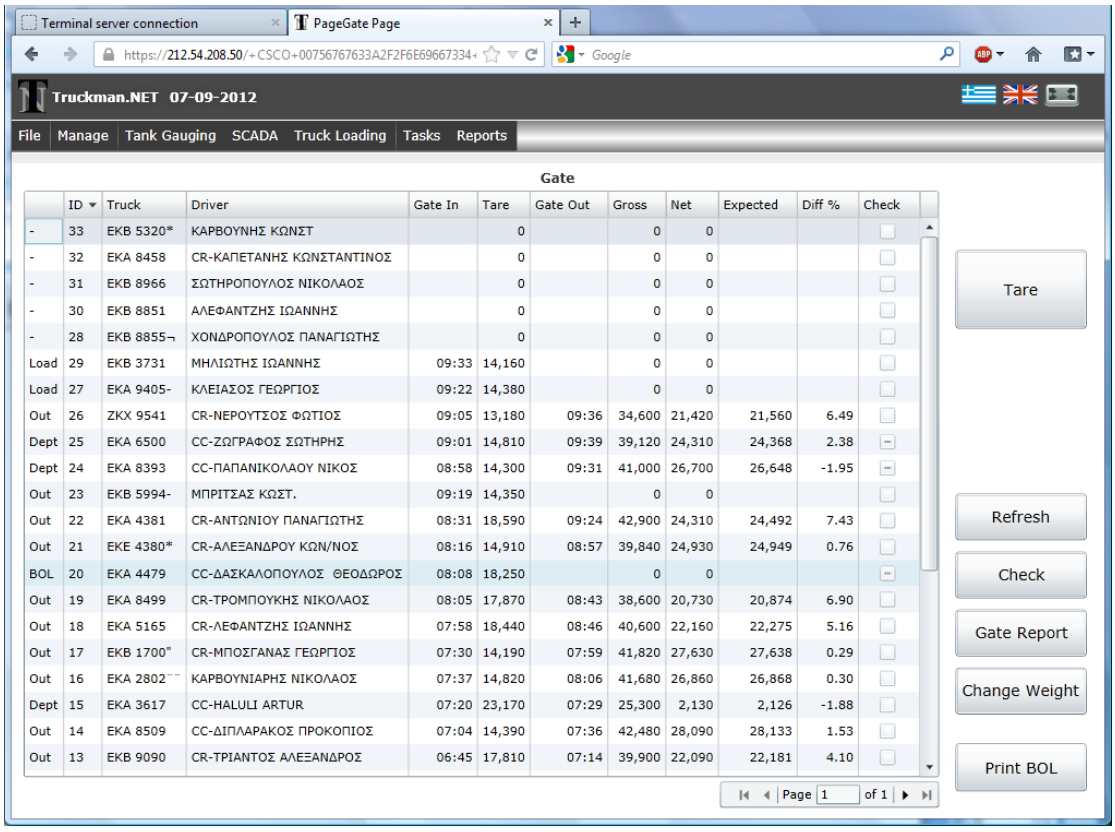
Deliveries and Customs Clearance Form



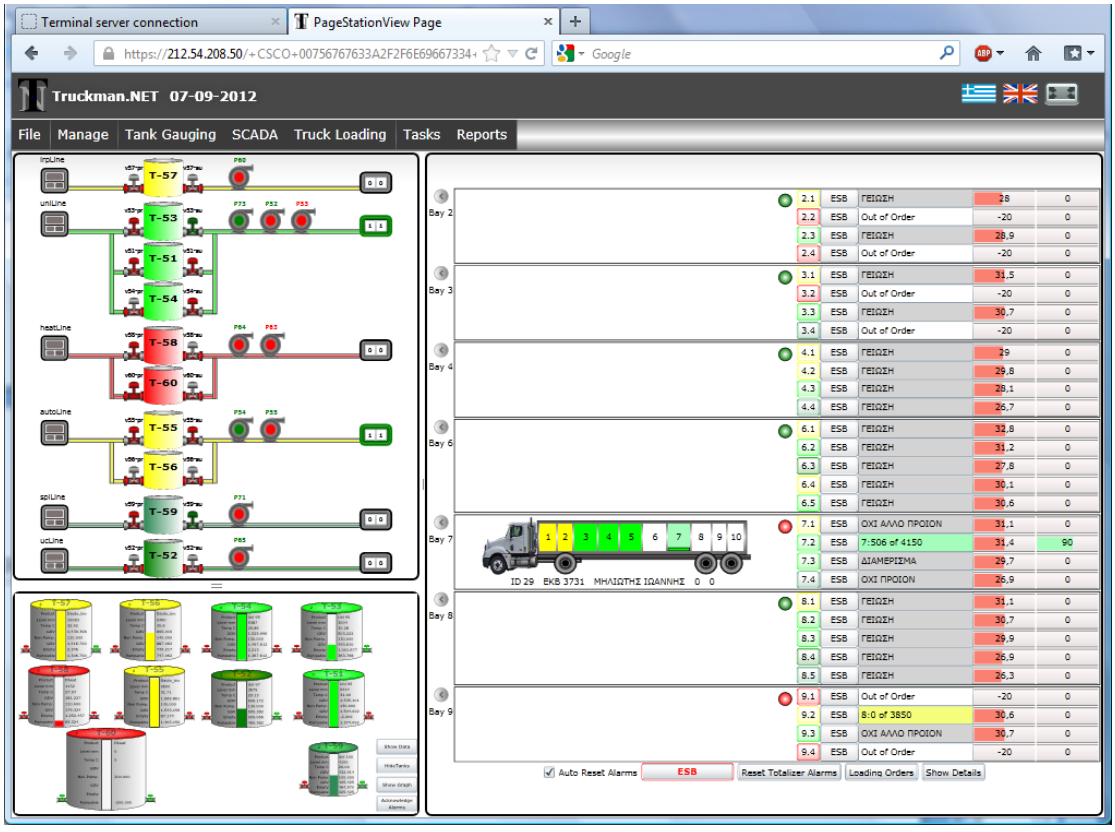
Inventory Form



Gate Form



Station Overview



References

Tuck Manager and Truckman.NET has been installed at the following sites:

Oil Terminal	***Installed subsystems***						
	Loading MGMT	***Isle Automation***	***Gate***	***Deliveries-Customs***	***Tank Manager***	***Invoices***	***SCADA***
AVIN Ag. Theodori	YES	YES	YES	YES	YES	YES	YES
EKO Alexandroupoli	YES	YES	NO	NO	NO	NO	NO
BP Igoumenitsa	YES	YES	NO	NO	NO	NO	NO
BP Kalamata	YES	YES	NO	NO	NO	NO	NO
BP Heraklion	YES	YES	NO	NO	NO	NO	NO
BP Perama	NO	YES	NO	NO	NO	NO	NO
Shell Amfilochia	NO	YES	NO	NO	NO	NO	NO
Shell Chania	NO	YES	NO	NO	NO	NO	NO
RPI Rhodes	YES	YES	NO	YES	NO	YES	NO
RPI Alexandroupolis	YES	YES	NO	YES	NO	YES	NO
SUN Oil Chalkis	YES	YES	NO	YES	YES	NO	NO
KA Oil Almyros	YES	YES	NO	YES	NO	NO	NO
Cyclon Perama	YES	YES	NO	NO	NO	NO	NO
Coral SA Kavala	YES	YES	NO	NO	NO	NO	NO
Hellenic Fuels Mytilini	YES	YES	NO	NO	NO	NO	NO
Agean Alexandoupolis	YES	YES	NO	NO	NO	NO	NO