

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
16 December 2004 (16.12.2004)

PCT

(10) International Publication Number
WO 2004/109423 A2

- (51) International Patent Classification⁷: **G06F**
- (21) International Application Number:
PCT/IN2003/000256
- (22) International Filing Date: 30 July 2003 (30.07.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
467/MAS/2003 9 June 2003 (09.06.2003) IN
- (71) Applicant (for all designated States except US):
AASIAONWHEELS NETWORK LIMITED [IN/IN];
Flat No. 317, 3rd Floor, Maheswari Chambers, Soma-
jiguda, Hyderabad 500 082, Andhra Pradesh (IN).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **MANTENA, A.,
Raaju** [IN/IN]; R/o. Flat No. 201, Kings Residency,
Opp. Satya Sai Kalyana Mandapam, Srinagar Colony,
Hyderabad, Andhra Pradesh (IN).
- (74) Agent: **BHASKAR, G.**; Flat No. 302, Triveni Apart-
ments, Viswas Nagar, Gudimalkapur, Hyderabad 500 028,
Andhra Pradesh (IN).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, SC, SD, SE,
SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US,
UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— without international search report and to be republished
upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: TELE TRACKERS

(57) Abstract: This is a specific one to one tracking and communication system developed exclusively by aasiaonwheels NETWORK LIMITED with their Virtual Private Network with several servers all over the country with IVRS (Interactive Voice Response System) and Web Server to track the people. It is a unique system where not only a person is tracked by telephone but instantly recorded in aasiaonwheels web site also. This is the first time in the world where tracking is done over telephone simultaneously with the information on the web server.

WO 2004/109423 A2

DESCRIPTION

The services of aasiaonwheels NETWORK LIMITED are not restricted only to the transport department. One day or the other the services will be extended to any thing to be tracked or communicated.

At this movement of launching the services to the people of India, we at aasiaonwheels are concentrating only on the services to be provided to the transport department.

aasiaonwheels NETWORK LIMITED made its strong presence in providing information and network solutions by conducting studies on various industry requirements.

The transport activity is there since ages. Sindbad the great voyager would not have struggled with the presence of aasiaonwheels at that age. The transport department is struggling with various inconveniences like lack of communication and continuous information on various fronts.

aasiaonwheels is providing the information for the transport department in the following areas.

The present day application is divided in three modules and further divided into sub modules and functions as given below:

The basic application is divided in to three parts.

1. Networking System
2. Web Application
3. IVRS Application

1. Networking System

The networking system consists of one Central Server and at least one Local server at every state. The Central server is configured with Web (Apache) server, Database (Mysql) server and Mail (Q-mail) server. All the local servers are called as IVRS servers. Following are the sub modules of this Networking Module.

1.1. Central Server (WEB Server)

This server consists of Web server, Database server and Mail server.

The Web server is placed on the gateway and is available on the Internet to the public.

1.1.1. Hardware Specifications

Recommended Server

Server Capable Compaq ML350 G3 Intel Xeon 2.4GHz

400 MHz FSB, 512 KB on chip cache

512 MB (2 X 256) two ways interleaving capable PC2100 advanced ECC SDRAM. 4

Memory banks total

Raid Controller Card

3 X 36 GB U3 10K rpm NHP HDD

6 X 1 Hot pluck HDD Support. 5 Slots and 10 Bays

Bundled with proliant essentials foundation pack consisting of CIM7.

Smart start and smart start scripting tool kit.

Hot Plug gable 1 + 1 redundant power supply.

1 X 10/100/1000 NIC card

1 X 10/100 NIC card

Bundled with CIM installation and configuration service.

1 X 48x CDRW

1.1.2. System Software Specifications

1.1.2.1. Linux 6.2 (Redhat)

1.1.2.2. My sql

1.1.2.3. Qmail

1.1.2.4. Java

1.1.2.5. Jakarta Tomcat Server

1.1.2.6. Appache web server

1.1.3. Application Software Specifications

1.1.3.1. Listener:

The listener shall continuously be running and waits for the call to collect the information such as:

- Local Server Name
- User Id
- ISD Code of the Calling Phone
- STD Code of the Calling Phone
- Telephone Number of the Calling Phone
- Call Date (YYYYMMDD)
- Call Start Time (HHMISS)
- Call End Time (HHMISS)
- Voice Message Serial Number
- Voice Message Size
- Voice Message Read Flag
- Voice Message Read Local Server Name
- Voice Message Read Date & Time

Whenever the driver jumps the state, the listener also provides the most recent transaction information as shown above from the central server to the local server, which receives the call from the driver.

1.1.3.2. Front-ends:

1.1.3.2.1. Web Front End:

Application Specific and screens (html files) & back end scripts were described below at Web Application module.

1.1.3.2.2. Mail Front End:

- 1) Leave Application
- 2) Leave Records
- 3) Reports Submission
- 4) Reviews (To be done by HOD)

1.2. Local Server (IVRS Server)

1.2.1. Hardware Specifications

1.2.1.1. Dialogic Board/Serial Ports

The Telephone are connected to the system through the Intel Dialogic Boards and Intelligent Serial Multiplexing cards ranging 4 ports to 64 ports depending on the requirement.

1.2.1.2. ML 330 Server Capable System

Compaq ML 330 Uni-processor capable 1.0 GHz with
256 MB RAM (ECC SDRAM)
4 Memory Banks total expandable to 2 GB
5 X 1 Non hot plug drive support
Single channel ultra 3 SCSI controller
4 Slots and 7 Bays
Smart start & smart start scripting tool kit
2 X 18 GB U3 10K RPM NHP Hard Disk Drive
2 X 10/100 NIC Cards
48X CD ROM
Key Board
Mouse

1.2.2. System Software Specifications

1.2.2.1. Red Hat Linux 7.2 with Updated to Kernel 2.4.9-13

1.2.2.2. LIS Streams (Dialogic Board Drivers)

1.2.2.3. Dialogic System Release 5.1 Software

1.2.2.4. MySql 3.23.51

1.2.2.5. Java Version 1.2.2

1.2.3. Application Software Specifications

1.2.3.1. IVRS Application:

The IVRS application will start running from the system boot up time. The service will start running from run level 2. When the user dials the predefined hunt (telephone) number, the call will land on one of the port of the dialogic board/serial card. Once the Application receives the call it waits for 3 rings and then it lifts the call. On lifting the call Welcome message is played and waits 30 seconds for the user to key in the User Id (DTMF).

On receiving the User Id followed by #, the system checks the database and authenticates the user. If the data is valid, the system plays the relevant vehicle number and corresponds to the other process. If there is any message to the dialer from his counter part the message is played and prompts for the message to be delivered to the counter part.

In case owner/consigner, before the counter parts message the system also plays the last tracked information of the driver such as reporting date, time, location and then it delivers the counter parts message.

1.2.3.2. Listener:

The listener shall continuously be running and wait for the information such as date & time of the call, message size and the user details along with the voice message from source local server which (is part of the AOW-VPN) receives the call from the actual user.

1.2.3.3. Message Replication:

The messages recorded by the IVRS Application will be replicated to its Neighboring servers with respect to the Services opted by the user. Messages to Owner from Driver will be stored at only one place i.e. at the User registered state server. The Messages to Driver from Owner will be stored at the server where the driver last called and replicated to its Neighboring servers by the listener.

1.3. Connectivity

1.3.1. Hosting Details

All the servers (Web server and IVRS servers) are co-hosted with leading Internet Service Providers (ISPs).

1.3.2. Connectivity

Each System is connected using the Internet Back bone from each location through the TCP/IP Network Protocol using a Static IP Address provided by the Co-Hosting ISP.

All local servers shall be communicating to each other only. The ports of the local servers are opened only to the other local servers of the AOW's VPN. The listeners will throw out all other calls.

Web server is placed at gateway to the Outer world and to all other Local Servers over the Internet cloud.

1.3.3. Transmission/Reception

1.3.3.1. Transmission

Once the call is matured at the Local server it updates the database with the transaction and transmits the messages and database transaction to Web Server and to its neighboring servers.

1.3.3.2. Reception

The data & messages sent by the other server will be accepted by the Daemon (Listener) and updates the same to its database and stores the message file in to corresponding folders.

1.3.4. Telephone calls and connectivity

One Dialogic board with 4/12/16 port or a Intelligent Serial port card with 8/16/32 ports is installed on every IVRS server. Each port is called a channel. On each channel one PSTN line can be connected. These lines could be Land Lines or GSM lines.

All these lines with hunting facility are published in AOW's web pages and circulated to the users.

Note: The network diagrams are provided in Fig 1 and Fig 2

1.4. Maintenance Central (WEB) & Local (IVRS) Servers

1.4.1. Preventive Maintenance

1.4.1.1. Network Maintenance:

We will be hosting servers at identified locations with various ISPs to establish our own VPN. Depending on the requirement and statutory demands we shall be identifying more locations.

From each ISP one Coordinator was identified and the Network Manager will coordinate with the identified Personnel from this ISP's.

On identifying a problem the Network Manager will intimate the Coordinator of that particular ISP by mail and also to the respective personnel of the specific ISP (Location).

The list of the personnel with their contact information i.e. Mail Id, Telephone Numbers, should be maintained by the Network Manager and development Project Leader along with the V.P, M.D and the secretary.

1.4.1.2. Software/Hardware Library Maintenance (CVS)

The Technical Department will maintain the CVS (concurrent version control system) for all the installations in the library at central office to help maintenance department in rectifying the problems arising at the respective locations.

This system will provide information to the management regarding all the details of the installation of a particular location.

1.4.2. Maintenance of Log Files

Log files are maintained for all the calls landed on the Local server. One file is opened per day as 'LSNYYYYMMDD.log' (LSN is Local Server Name). Though the information is available in database, the system also maintains a flat file for security and audit reasons.

1.4.3. Miscellaneous

Deletion of messages from the respective servers once the Service expires.
Advance intimation to the Vehicle Owners about the expiry date and also the renewal date. Once in a week the servers will be Automatically restarted at a specific predefined time (every Sunday at 0.01 hours).

Checking of the Telephone lines (PSTN and Mobile) once the day begins. This done by the respective Business Executives of the state, and a weekly report has to be sent to head office. Dead Telephone Lines Monitoring System.

2. The Web Application Module:

Overview:

The functions of the web application are used for defining the conditions and to input the information and finally to view the required results. The sub-modules of this application area are given below.

- 2.1. System Administration
- 2.2. People System
- 2.3. Tracking System
- 2.4. Load Management
- 2.5. Vehicle Trading
- 2.6. Insurance
- 2.7. Money Transfer
- 2.8. SOS Services
- 2.9. Logs
- 2.10. Monitoring System
- 2.11. Reports
- 2.12. Business Application

2.1. System Administration

Overview:

This module deals with Administrators Responsibilities like User management, Process management, Access Control in addition to the other responsibilities, which include the Database management, and MIS.

2.1.1. User Management

Overview:

This function deals with the process of creating users and giving them the required privileges by the system administrator.

In this function a user is created or disabled by the system administrator. Type of the probable users in the access control system would be ZBA's, ABA's, Agents/brokers and the Employees of aasiaonwheels NETWORK LIMITED working in various departments.

In case of the first four types of users i.e. ZBA's, ABA's, Agents or Brokers the User Id and Password shall be created at the time of registration with their respective codes as User Id and default Password.

The Users shall change the Password immediately on getting the User Id after Registration and at their convenience. The system also defines automatically the Accessible Functions for the Respective users.

- (i) To Create a Work Group
- (ii) To Disable a Work Group
- (iii) To Create a Sub Group
- (iv) To Disable a Sub Group
- (v) To Create a User
- (vi) To Disable a User

2.1.2. Access Control

Overview:

For the purpose of security, access to each function is granted to the authorised users within the sub group and groups.

Granting access permissions can be done for a function alone or to a sub module or to the entire module.

The system administrator grants certain users with predefined privileges for ac like read, modify or create. Each group is given a unique user id and password to access only certain modules or functions of the system, which are predefined to him.

2.2. People System

Overview

This sub module handles people involved and concerned with AOW that include the Business Associates and Employees. Every individual concerned shall be identified with a user Id, Employee Number, Business Association Code such as Zonal Business Associate Code and Area Business Associate Code.

2.2.1. Zonal Business Associates.

Overview:

AOW Coordinator in the Head Office has to log on to the Business Coordination Department Form by entering his user id and password in the FCD Login Form provided to him by the system administrator.

2.2.2. Area Business Associate

Overview:

AOW Coordinator in the Head Office has to log on to the Business Coordination Department Form by entering his user id and password in the FCD Login Form provided to him by the system administrator.

AOW Coordinator in the Head Office has to click on the ABA registration link in the Business Coordination Department Form to view the ABA registration form.

2.2.3. Agents

Overview:

Agents do posting of the Load. The agents also will be co-coordinating the registration of Buyers and Sellers of the vehicles with Business Associates. AOW is providing "load availability" services to agents, to avail this facility they should register with aasiaonwheels.

2.2.3.1. Agents Registration

Overview:

AOW Coordinator has to go to the aasiaonwheels website and click on the Agents Registration Link.

2.3. Tracking System

2.3.1. Vehicle Tracking

Overview:

Any vehicle to be tracked should register for lifetime with AOW. After registration the concerned should also buy a service renewal for specific period. AOW is supplying various services, which are available in the market. In addition to this communication between Owner and Driver AOW also providing services to Consignor/Consignee. Trip card is one such service for consigners. With these Cards, Driver can keep providing the information regarding where about of Vehicle / Consignment through the IVRS system. The same information will be available to the Consignor / Owner. In order to Track a Vehicle the Owner/Consignor has to go to the Website.

2.3.1.1. Online Application for Vehicle Registration

ABA Functions

Finance Functions

FCD Login Form:

Marketing Dept Login Form:

2.3.1.2. Business Data.

Overview:

For providing various services to the general public in various fields, AOW has opted Transport Community in its initial stage for providing various services like Tracking of Vehicles, Money Transfers, Load Availability services etc.,

2.3.1.3. Vehicle Registration

Overview:

The details provided by the owner for registering the vehicles are entered into the database. This information is even used for generating the vehicle cards. The registration of the vehicles and the generation of the vehicle cards are done at the head office by the Business Coordination department. AOW coordinator has to click on the Business coordination link in the website to view the FCD Login Form.

2.3.2. Vehicle Tracking Service Renewals

Overview:

For the purpose of renewals of the vehicle card service the owner has to contact the nearest ABA and buys the vehicle service renewal card.

2.3.3 Vehicle Tracking

Overview:

There are two ways of Tracking Vehicles, one is through the IVRS system and the other through website.

- 1) Through IVRS system the driver/owner can send or receive messages, which can be used to track the vehicle.
- 2) Through aasionwheels website one can track the vehicle using the vehicle number.

2.3.4. Trip Card

Overview

To provide services to the general public who hire the services of a vehicle to ship their cargo AOW has thought about a novel idea. Using Trip card service one can communicate to the driver of the vehicle, which carries his cargo. Trip Cards are available in the open market for various periods starting from 3 days to one month. These cards are used only for Tracking.

One can track the vehicle either on web site www.asiaonwheels.com by selecting the relevant options or by dialing predefined telephone numbers published to get the information on the IVRS.

Consignor can buy the Trip Card, which are available in open Market. After the card is purchased, the consignor activates the same as per the Procedure provided by AOW. With this Card, Driver can keep providing the information regarding whereabouts of Vehicle / Consignment and can also send voice messages. The consignor as well can communicate with the driver. The Usage / Validity of the Card is for Number of days (as per Card) from the date and time of activation.

To avail the services of Trip Card one has to activate Trip Card through AOW Website or through IVRS.

2.3.4.1. Trip Card Activation

To avail the services of Trip Card one has to activate Trip Card through AOW Website or through IVRS.

2.3.5. People Tracking

To provide services to the general public who are on constant move asiaonwheels has come up with a novel idea. Using Trip card service one even can communicate with a group of people who are miles apart. Even the driver and his family can communicate with a special type of Trip Card (family card). Special types of cards are also being provided for medical representatives who can communicate to his superiors/head office.

2.4. Load Management

To avail the services of Load management one has to register with asiaonwheels. The process is divided in to two parts. One is Posting New Load and the other is Retrieve/ Delete Loads.

2.4.1. Load Posting

Overview

This function is available to the agents to Post the Loads. The agent will be giving the information such as the available load, from place, to place and details of the load. The agent also will be updating the information as and when required to change the status of the loads already posted.

This facility is available from website <http://www.asiaonwheels.com>.

Only registered users/agents can avail this function.

a) Post New Loads Function:

Overview:

By clicking the Post New Loads Function then it displays the screen and user has to post the loads and then click submit so that loads are posted.

b) Retrieve / Delete Load:

Overview:

If authorized user entered any wrong information about loads then he clicks the Retrieve/Delete button. So the user checks which information he wants to delete and click submit button so that wrong information typed by the user is deleted.

By clicking the Retrieve / Delete icon it displays last 7days information as follows:

2.4.2. Tracking Load

Following is the procedure for Tracking Loads.

Overview

This function is used check for the availability of loads from a particular place. This facility is available from website <http://www.asiaonwheels.com>. Only registered users can avail this function.

2.5. Vehicle Trading

Following is the procedure for Vehicle Trading. The process is divided into two parts. One is "Buy a Vehicle" and the other is "Sell a Vehicle". To avail the services of Sell one has to register with aasiaonwheels.

2.5.1. Buyer Registration

Overview:

To buy a vehicle the client has to log on to aasiaonwheels website and click on buy a vehicle icon and has to provide his personal details such as Name, Phone no, E-mail Id and the make of the vehicle he is interested in. In order to fix a deal with any prospective seller the buyer has to register with aasiaonwheels by paying the registration charges at his nearest ABA.

2.5.2. Seller Registration.

- ✓ **To sell a vehicle the Vehicle Owner has to approach nearest AOW Local ABA**
- ✓ **ABA will issue a form to vehicle owner (no: SC-105) to be filled and handed over by owner to ABA.**
- ✓ **ABA will collect selling charges**
- ✓ **The serial number of SC-213 is the registration number of the seller, during the validity period of the receipt (SC-213).**
- ✓ **AOW will post the relevant data of the vehicle, which would be available for all prospective buyers located anywhere in India.**
- ✓ **AOW coordinator will post the data to the database and this posted data is useful in getting back the information in "Buy a Vehicle" Process.**
- ✓ **The information of the vehicle to be sold is maintained in the database till the validity date of the registration or till the vehicle is sold.**
- ✓ **Once the vehicle is sold the information is automatically archived from the database.**

2.5.3. Posting the Vehicle details (sale)

2.5.4. Updating the sold out vehicle details

2.5.5. Search engine for vehicles for sale

2.6. Insurance

2.6.1. Insurance of Vehicle

2.6.2. Insurance of Goods

2.6.3. Insurance of People

2.6.4. Collection of Premium

2.6.5. Claim Processing

2.6.6. Claim Payments

2.7. Money Transfer

- AOW is providing one more convenient facility for the owners and drivers regarding transfer of money
- Trucks/vehicles keep moving to places all over India. The general practice is after the goods are unloaded consignee makes the payment to the driver.
- Driver physically carries money with him and hands over to the truck owner after he reaches the vehicle owners place.
- Some of the asiaonwheels area business associates are entitled to handle the cash for money transfer.
- Such offices are identified with a display at the office with a specific code number provided for them and an authorization certificate by head office.
- Area business associate is authorized to handle transport service charges amount only.
- asiaonwheels does not handle the goods amount.
- At each of the area business associate office the limit of amount to be received for transfer is fixed suiting the local conditions.

2.7.1. Money Receipts

- The driver approaches area business associate with the amount, he would like to transfer to his owner.
- The area business associate gives him a receipt stating vehicle number, amount and his destination area business associate code.

2.7.2. Money Payments

- The owner collects the money deposited by the driver at some place within a couple of days.
- The area business associate issues a check regarding the payment to the owner.

2.7.3. Money Transfer - Location to Location

- The money collected from the driver is deposited into money transfer account.
- The money deposited at all the area business associate is transferred to head office money transfer account automatically.
- Head office will then redirect the amounts to the concerned area business associate account to be delivered to the owner.

2.8. SOS Services

- Accident Assistance
- Health Care Assistance
- Traffic Jams and Assistance
- Area business associate will maintain the list of hospitals and liaison agents in his area with him for emergencies and health care services.
- Area business associate does the needy and forwards the bills to the vehicle owner.

2.8.1. Health Care

- Once in a while it may happen that on the way driver/cleaner may fall ill at far of places on their journey.
- AOW will extend the required services as per the need of the situation.
- The driver/cleaner when falls ill, have to contact the nearest area business associate referring to the directory given by AOW.
- The area business associate will advice a liaison person to take care of the situation
- Area business associate will intimate the developments and proceeds according to his advice.
- Except for emergency and for first contact care the area business associate does not wait for any confirmation from owner.

2.8.2. Accidents/Breakdowns

- AOW is coordinating at the time of accidents and providing assistance at the time of accidents and breakdowns.
- Whenever a vehicle meets with an accident, the truck driver/cleaner will inform to nearest area business associate.
- The area business associate will send any of the liaison person to the spot to assist the driver/cleaner.
- Then with the report of driver/cleaner or liaison person, the area business associate intimates the owner and acts according to his instructions.

2.8.3. Financial Help

- During the course of carrying the goods, the driver may come across certain emergency requirements on his way for making payments at check posts or any other places.
- In such situations the driver showing vehicle card at any of the area business associate can request regarding his requirements.
- The area business associate then contacts the owner and on his confirmation and paying the amount at his area business associate office, will provide the necessary amount to the driver.

2.9. Logs

Overview:

The data collected in the database through the IVRS system as well as the data entered by the users is collected in log files for further reference .For every module a log file is maintained as a backup.

2.10. Monitoring System

Overview:

The day to day activities of the head office as well as the system has to be monitored on a regular basis. For this purpose at least one person will monitor the server and the activities within the head office daily.

2.11. Reports

Overview:

Depending on the department day to day reports are generated for that particular department. For this purpose every department is given a particular application to generate reports depending on their requirements.

2.12. Business Application

2.12.1.1. Financial Accounting

2.12.1.2. Accounts Receivable

2.12.1.3. Accounts Payable

2.12.1.4. Stores Accounting

2.12.1.5. General Accounting

2.12.2. Inventory Control

2.12.2.1. Purchase

2.12.2.2. Stores

2.12.3. HR

2.12.3.1. Personnel

2.12.3.2. Payroll

3. The IVRS Application:

Overview:

The Interactive Voice Response System (IVRS) is useful for communicating to the user in the voice form. Most important thing in our IVRS is that we have developed this system with less interruption and flows in a stream on either side.

AOW's IVRS system is available in all the Indian languages selected automatically on providing the user id.

3.1. Service Activation Process

Overview:

To provide maximum facility for end users, AOW is providing a service – Renewal of Service for Vehicle card, Trip Cards and Family cards. Using this service one can renew/activate the service prior to the existing service expires. Though the user activates the service bought, the same will come in to force only after the previous service ends. User can buy the renewal card or service card from the open market and get his service renewed from his desk only either through Web or through the IVRS system.

3.1.1. Vehicle Card Service Renewal

The user after purchasing the service in the market will dial the predefined AOW phone.

'Swagath asiaonwheels' is the message played by the system for assuring the user that the dialed number is correct.

Now the user gives the Activation-Id (Printed on the Service Card)

11 9 1234567# is the Activation-Id entered by the user which is printed on the card purchased.

VC XX 999999 is the Service Renewal Number played by the IVRS system for confirmation

Please enter the password is the message played by the System.

XXXXXXXXXX# user enters the 10-digit password printed on the card.
If the password matches with database the system will continue with the following, Otherwise system will play Invalid password and hangs.

Enter your Original User-Id Now the user enters the owners User Id

11 2 1111111# is the number given by the Owner

AOW12345 is the vehicle number played by the system to confirm the information and ask for

Press 1 for confirmation On selecting 1 the system will prompt the following.

Press 2 for cancellation the system will hang

Enter Your State Code

01 for AP

02 for Tamilnadu

03 for Kerala

04 for Karnataka

etc., for selecting the state code

On authentication with the database the system will prompt

Your Vehicle Tracking Service Card Number
VC-XX-999999 Renewed successfully

Or

Your Vehicle Tracking Service Renewal failed -----
Try again...

3.1.2. Family Card Renewal

Overview:

The user after purchasing the service in the market will dial the predefined AOW phone.

'Swagath asiaonwheels' is the message played by the system for assuring the user that the dialed number is correct.

Now the user gives the Activation-Id (Printed on the Service Card)

13 9 1234567# is the Activation-Id entered by the user which is printed on the card purchased.

FC XX 999999 is the Service Renewal Number played by the IVRS system for confirmation

Please enter the password is the message played by the System.

XXXXXXXXXX# user enters the 10-digit password printed on the card.

If the password matches with database the system will continue with the following, Otherwise system will play Invalid password and hangs.

Enter your Original User-Id Now the user enters the owners User Id

13 2 1111111# is the number given by the Owner

FC-XX-123456 is the vehicle number played by the system to confirm the information and ask for

Press 1 for confirmation On selecting 1 the system will prompt the following.

Press 2 for cancellation the system will hang

Enter Your State Code

01 for AP

02 for Tamilnadu

03 for Kerala

04 for Karnataka

etc., for selecting the state code

On authentication with the database the system will prompt

Your Family Service Card Number

FC-XX-999999 Renewed successfully

Or

Your Family Service Card Renewal failed -----

Try again...

3.1.3. Trip Card Activation

To use the Trip Cards, the Buyer has to first activate it after purchasing from the open market. This activation can be done either through Web or through IVRS system. The following is the Trip Card activation procedure through IVRS System.

1. Dial pre-defined aasiaonwheels telephone number
2. Consignor has to dial his User ID, provided on trip card.
3. First system checks whether the trip card number provided by the Consignor is valid or not.
4. If the trip card number provided by the consignor is valid
 - a) System plays the Trip card serial number to the user for confirmation
 - b) System plays the message "Enter Your Password" and waits for 30 sec to accept the password.
 - c) Consignor has to dial the password provided on the trip card
 - d) System checks the password provided by the Consignor in database.

- e) If the password provided by the Consignor is correct, system plays the message "Your Trip Card is Successfully Activated". Else it plays the message "Wrong Password"
5. System disconnects the Call.
6. If the trip card number provided by the consigner is not valid System plays the message "Invalid Trip Card" and disconnects the call.

3.2. Messaging System

3.2.1. Vehicle Tracking

Overview:

For the sake of driver and owner communication aasiaonwheels is providing the facilities of "Vehicle Cards". Using IVRS system driver can communicate with his owner who is miles apart by dialing a predefined aasiaonwheels number and recording a message. At the same time Owner can get the Information of his driver where the vehicle is located at a particular time.

Driver:

1. Dial Pre-defined aasiaonwheels telephone number.
2. System plays the message "Swagath asiaonwheels"
3. Driver has to dial his User ID provided by aasiaonwheels
4. System checks for the validity of User Id provided by the Driver. If the User ID dialed by the driver is valid, it checks for the expiry date of that User Id. If the expiry date is greater than or equal to toady's date, then it proceeds further
 - a. System plays message "Your Vehicle Number is" and Plays his vehicle number
 - b. System plays message "Your Last Message is Delivered to Owner" or "Your Last Message is not delivered to Owner" depending on the status of the previous message whether it is delivered or not delivered
 - c. System plays the message "Owner's Message is" and it will play the owner's message to the driver
 - d. After playing the owner's message, system plays the message "Record Your Message" and starts recording the Driver's message and provides 30 sec to deliver his message
 - e. After Completion of delivering his message user has to press '#' as an indication of termination or system will disconnect the call.
5. System disconnects the call.

Owner:

1. Dial Pre-defined aasiaonwheels telephone number.
2. System plays the message "Swagath asiaonwheels"
3. Owner has to dial his User Id provided by aasiaonwheels
4. System checks for the validity of User Id provided by the owner. If the User Id dialed by the owner is valid, it checks for the expiry date of that user ID. If the expiry date is greater than or equal to toady's date, it proceeds further.
 - a. System plays message "Your Vehicle Number is" and Plays his vehicle number
 - b. System plays the driver's last message details to owner.
(Ex: Your Driver last Reported on '23/05/2003' at '12:23' from Hyderabad)
 - c. System plays message "Your Last Message is delivered to Driver" or "Your Last Message is not delivered to Driver" depending on the status of the previous message whether it is delivered or not delivered
 - d. System plays the message "Driver's Message is" and it will play the Driver's message to the Owner
 - e. After playing the Drivers message, system plays the message "Record Your Message" and starts recording the Owner's message and provides 30 secs to deliver his message
 - f. After Completion of delivering his message user has to press '#' as an indication of termination or system will disconnect the call.
5. System disconnects the call.

3.2.2. Trip Card Tracking

Trip cards are available in open market and they serve a major role in communications between Driver and Consigner / Consignee / Owner. These Cards are available in various denominations pertaining to their validity periods starting from 5 days, 15 days, 30 days etc.,

Using these Cards Driver and the Consigner / Consignee / Owner can communicate with each other through the IVRS system by dialing to a predefined aasiaonwheels number.

Driver:

1. Dial Pre-defined aasiaonwheels telephone number.
2. System plays the message "Swagath asiaonwheels"

3. Driver has to dial his User ID printed on the Trip Card
4. System checks for the validity of User ID provided by the Driver. If the user id dialed by the driver is valid, it checks for the expiry date of that user ID. If the expiry date is greater than or equal to today's date, then it proceeds further
 - a) System plays message "Your Trip Card Number is" and Plays his Trip Card number
 - b) System plays message "Your Last Message is Delivered to Consigner" or "Your Last Message is not delivered to Consigner" depending on the status of the previous message whether it is delivered or not delivered
 - c) System plays the message "Consigner's Message is" and it will play the Consigner's message to the driver
 - d) After playing the Consigner's message, system plays the message "Record Your Message" and starts recording the Driver's message and provides 30 Sec to deliver his message.
 - e) After Completion of delivering his message user has to press '#' as an indication of termination or system will disconnect the call automatically after 30 sec.
5. System disconnects the call.

Consigner:

1. Dial Pre-defined aasiaonwheels telephone number.
2. System plays the message "Swagath asiaonwheels"
3. Consigner has to dial his User ID printed on the Trip Card
4. System checks for the validity of User ID provided by the Consigner. If the user ID dialed by the Consigner is valid, it checks for the expiry date of that user ID. If the expiry date is greater than or equal to today's date, it proceeds further.
 - a) System plays message "Your Vehicle Number is"
 - b) and Plays his Trip Card number
 - c) System plays the driver's last message details to the Consigner.
(Ex: Your Driver last Reported on '23/05/2003' at '12:23' from Hyderabad)
 - d) System plays message "Your Last Message is Delivered to Driver" or "Your Last Message is not delivered to Driver" depending on the status of the previous message whether it is delivered or not delivered.
 - e) System plays the message "Driver's Message is" and it will play the Driver's message to the Consignor.
 - f) After playing the owner's message, system plays the message "Record Your Message" and starts recording the Owner's message and provides 30 Sec to deliver his message.

- g) After Completion of delivering his message user has to press '#' as an indication of termination or system will disconnect the call automatically after 30 sec.
5. System disconnects the call.

3.2.3. Family Card

Overview:

For the drivers who are on constant move aasiaonwheels has come up with a novel idea. Using IVRS system driver can communicate with his family who are miles apart with a special type of Card known as "Family Card". This feature provides the facility to family of the driver to know the whereabouts of the driver.

Driver:

1. Dial Pre-defined aasiaonwheels telephone number.
2. System plays the message "Swagath asiaonwheels"
3. Driver has to dial his User ID printed on the Driver-Family Card
4. System checks for the validity of User ID provided by the Driver. If the user ID dialed by the driver is valid, it checks for the expiry date of that user ID. If the expiry date is greater than or equal to today's date, then it proceeds further
 - a) System plays message "Your Card Number is" and Plays his Family number
 - b) System plays message "Your Last Message is Delivered" or "Your Last Message is not delivered" depending on the status of the previous message whether it is delivered or not delivered
 - c) System plays the message "Message is" and it will play his family's message to the driver
 - d) After playing the family's message, system plays the message "Record Your Message" and starts recording the Driver's message and provides 30 Sec to deliver his message
 - e) After Completion of delivering his message user has to press '#' as an indication of termination or system will disconnect the call automatically after 30 Sec.
5. System disconnects the call.

Family:

1. Dial Pre-defined aasiaonwheels telephone number.
2. System plays the message "Swagath asiaonwheels"
3. Driver's family has to dial the User ID printed on the Family Card
4. System checks for the validity of User ID provided by the Driver's family. If the user ID dialed by the Driver's family is valid, it checks for the expiry date of that user ID. If the expiry date is greater than or equal to today's date, it proceeds further.
 - a) System plays message "Your Card Number is" and Plays his Family Card number
 - b) System plays message "Your Last Message is Delivered to Driver" or "Your Last Message is not delivered to Driver" depending on the status of the previous message whether it is delivered or not delivered
 - c) System plays the message "Driver's Message is" and it will play the Driver's message to his family
 - d) After playing the driver's message, system plays the message "Record Your Message" and starts recording the family's message and provides 30 Sec to deliver his message
 - e) After Completion of delivering his message user has to press '#' as an indication of termination or system will disconnect the call automatically after 30 sec.
5. System disconnects the call.

CLAIMS

Unique system of tracking on telephone:

We Claim: -

The characteristics of the tracking system is as follows

1. Automated tracking information** is provided through any telephone*
2. The tracking information** is retrieved / received through any telephone* from anywhere.
3. Voice communication through any telephone* from Party "A" to party "B" and vice versa.
4. Party "A " can receive the message meant for him provided by Party "B" and also send the message meant for Party "B".
5. Party "B " can receive the message meant for him provided by Party "A" and also send the message meant for Party "A".

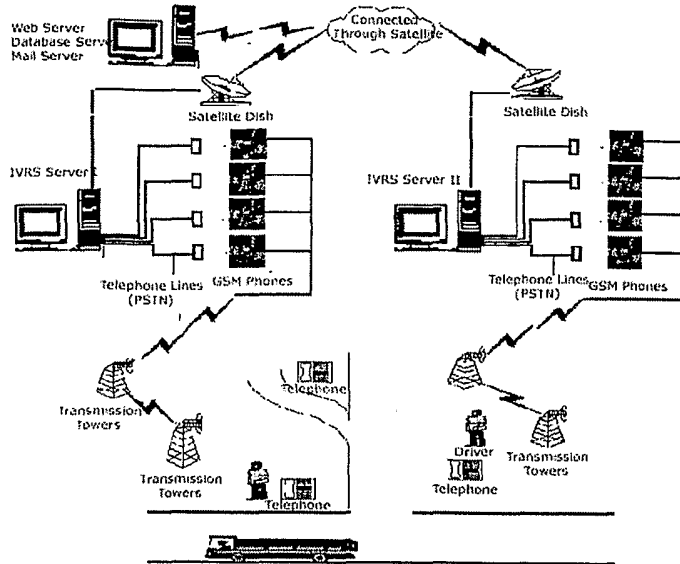
The above facilities are provided by using existing infrastructure of Telephones and Internet by the software developed exclusively by this purpose by **aasiaonwheels** NETWORK LTD.,

* Telephone: PSTN / GSM / CDMA etc.,

** Tracking information: Location, Date, and Time

Network diagrams Communication Network

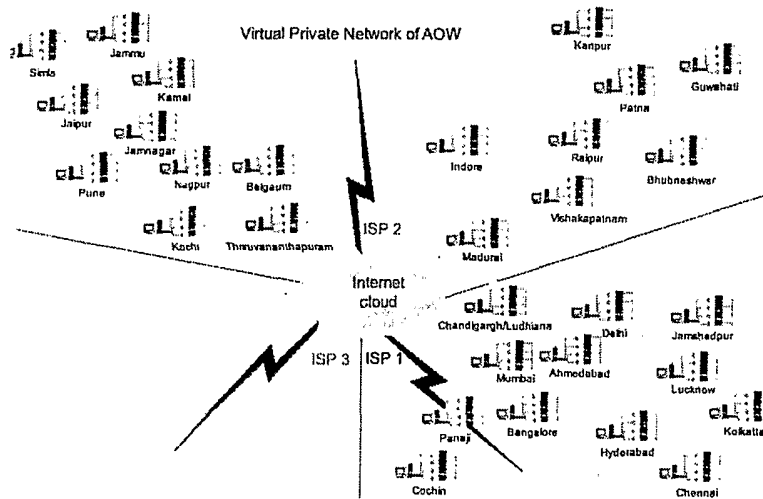
Fig 1



Local system setup at Hosting place to which user is called.

VPN (Server distribution among ISPs)

Fig 2



Network Connectivity of all the servers at different Collocation points