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ADVANCED INVENTORY DISTRIBUTION APPLICATION

ACTUAL CONTEXT AND MARKET NEEDS

Travel industry grew in the last decade bringing quality travel services to more and more countries and determined the travelers to refine their taste.

Because of their complexity and variety of possibilities, the composed travel offers (packages, tours, charters, etc.) are very hard to handle and manage. A complete software solution must be very comprehensive and therefore very difficult to operate.

Solutions were needed to allow the tour operators to create and update inventories and further distribute their travel services to the resellers and even directly to their customers, into a unitary fashion.

AIDA is an inventory and distribution solution, ideal for tour operators, TMCs and PCOs.


INTRODUCING AIDA

AIDA is the result of many years of research and development together with experienced tour operating agents. The innovative concepts and ideas make this product very important for travel industry, AIDA being today a complete and complex solution covering most of the scenarios, and yet a system natural and easy to work with.

The application adapted valuable concepts from existing distribution systems and was enriched with innovative and smart ideas, bringing distribution closer to the tour operating agencies.

Started from the idea of a complete computer travel distribution system and front office, the project was enriched with mid-office and reporting features in order to create a complete solution and give the tour operator all the tools needed to fully control the business.

AIDA successfully comprehends all the features great travel distributors have for all sorts of services: accommodation (hotels, villas, apartments etc.), transportation (air, bus, car, transfers etc.), other services (meals, transfers, cruises, trips, tickets etc.), packages (tours, vacations etc.) and can easily bring its customers in top level distribution competition. As a plus, being developed using the latest technology and concepts, it is very flexible and permits fast changes to components structure (capacities, pricing, service links and restrictions, packages etc.), according to rapid market variations trend.



AIDA HIGHLIGHTS

- Developed using the latest technologies available in web development, being continuously improved by dcs plus team
- Optimized to work with large data volume and many distributors at once
- Offers instant access to a wide variety of travel services, carefully loaded and managed by tour operator
- Automatically manages the reservations for the tour operator (together with voids and refunds), issues the invoices for the resellers
- Helps the tour operator simulate and verify its offers before opening them to sales
- Allows dynamic packaging by linking several services with optional/mandatory links, with on the fly setup (breaking and rejoining while package is on sale)

- Comprehensive but yet natural to operate with prices handler
- Uses advanced documents templates manager to allow design of different layouts for documents (vouchers, proformas, travel documents), ensuring flexibility and adaptability
- Allows the resellers to search and make reservations, manage their reservations, extract their vouchers, proformas into a reseller interface, into their account, based on given credentials
- Uses e-mail alerts and warnings – configure different warnings to be sent by e-mail (reservations which are about to be cancelled, communication errors etc.)
- Advanced reporting tool, both for tour operator and resellers
- Keeps comprehensive logs which include each operation and message inside the application, from communication with the distributors to booking operations



BASIC ARCHITECTURE AND CONCEPT

The application runs on a central server which stores the databases and is accessed both by tour operators and by resellers users using a web browser based on user accounts, with no other extra software, over TCP/IP protocol standard connection.

AIDA has been designed with a flexible and modular structure, with user access per module and an easy to use plug-in system. The core of AIDA is DCS Engine™, a structured and ready to use development framework, which consists of a collection of libraries, module management, user access granting, auto-complete, XML requests, web service, etc.

Web based software has major advantages:

- Accessibility and scalability
- Low cost implementation and maintenance



Accessibility and scalability

The application is accessible virtually from anywhere. Any member, whether is a tour operator managing the inventories and offers or a reselling agent searching for services, can access the system based on his credentials from any location, needing just a terminal and a network connection.

Extension of reseller number, adding more users, relocation or any other changes in the structure have no impact in application operation and usage. The architecture adapts to the new structure. The system can accommodate to various changes and grow as much as needed, limited only by central server hardware performance and network bandwidth.

Low cost usage

The system runs from a central server which is accessed by all its customers over network, from their terminals, using standard operating systems (e.g. Microsoft Windows®, Linux, Apple OS, etc.) and standard web browsers (e.g. Microsoft Internet Explorer®, Mozilla Firefox etc.)

The connection to the central server is based on TCP/IP networking protocol, over an existent network infrastructure, very common these days in Internet business.


AIDA requires no special intervention, application or maintenance on user's terminals. The software needed on the server is free (Linux based server) and the hardware requirements are fairly low. AIDA is considered to have a very low TCO.

CLIENT PROFILE AND IMPLEMENTATION

AIDA targets the tour operating agencies which create their own packages (holidays, tours, city breaks, trips etc.) or manage inventories of individual services (hotels, boat tickets, concert tickets etc.), as well as resell other services and packages from third party tour operators, and require a way to automatically manage the availability inventory and prices. The travel agency wants to sell all these products (either in travel packages or en detail), to individuals, companies or groups, through resellers, own travel agents or third party front offices.

The client should understand the benefits of an automated inventory management system, with reservations handling and booking interface for resellers.

The implementation process has 6 stages:

- Initial presentation of the product, client profiling and assessment, discussion on the client's needs, full project forecast, milestones to fulfill the plan
 - Designation of the responsible person on client's staff, to handle the system and communicate with our team
 - Product deployment and full training with the responsible person
 - Piloting phase with a reduced number of travel agents
 - Discussion over the piloting phase and adjustments, when necessary
 - Moving to production
- 

PRODUCT MODULARITY

AIDA was built on a modular structure, functionalities and modules being able to be plugged or unplugged as per client request, in order to perfectly fit the travel agency needs.

This way, the product can address small travel agencies which have a few products on sale and require less functionality, as well as large travel agencies which have larger range of products and require complex packaging options, XML distribution and so on.

The modules are plug-ins, so they can be added or removed per client request. The customer actually builds up the solution according to his business needs.

AIDA core engine	The main AIDA engine
Accommodation services	
Transportation services	
Transfer services	
Other services	
Static packages	Services joined statically, under a fixed package
Dynamic packages	Links among the services and dynamically created packages
Extended hotel details	Additional hotels data, like location description, facilities, long description, multiple photos etc. (very useful when AIDA is used as hotel integrator)
Back-office export	Standard export of reservation data into the back-office application
Webservices	Full webservice for custom made interaction with AIDA inventory (very useful for custom made front offices and 3rd party front office integrations)



MAINTENANCE AND SUPPORT PROGRAM

Being a complex solution, AIDA is fully maintained and supported by our team, to ensure that the client uses the system at full capacity at all times.

Periodical updates and general product improvements

AIDA is a continuously evolving product; it is permanently updated, with improved functionalities, additional features etc. These functionalities are in the benefit of the application and represent an advantage for all of its customers.

Currently AIDA is in the fast growing process, accumulating as much functionality as possible, over a robust and scalable structure.

Examples:

- Engine optimizations
- Improved caching to work with several concurrent searches
- Additional information into the reservations list
- New packages types
- Advanced cancellation policies
- Modifications for reservations
- Full webservice for integrations with 3rd party front offices

Maintenance, help and support, consultancy

Help and support

AIDA requires special care while running, to make sure everything goes well at all times. Our team is most suitable to monitor and track the application parameters, to ensure they stay within normal limits.

Examples:

- Error messages
- Response failures
- Incorrectly sent values
- Wrong cancellation policy

Investigations can be performed inside AIDA operations log to extract problem reports.


Our team stays in touch with the tour operator representative in order to understand, solve or transmit any kind of issues.

Maintenance

The system is being permanently monitored by our team team to ensure that all the parameters run within normal ranges. Alerts sent by the system are tracked for smooth operation. Periodically DB maintenance and system maintenance can increase the overall system performance.

Consultancy

Some procedures and operations can be performed in different ways. Some might be better than others. Our team is available for advice and consultancy on system features and usage and new business opportunities.



PRODUCT EVOLUTION

AIDA has evolved on 2 directions

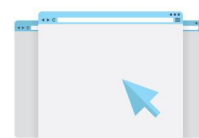
- Standardization and interconnectivity – being mainly an inventory application, AIDA is built to be as versatile as possible, giving the client the necessary freedom to sell the products on any channel/platform
- Functionalities – the product is continuously evolving, many new functionalities being added on a monthly basis

FUNCTIONAL DESCRIPTION

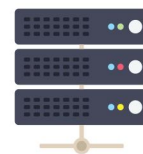
The system has 2 major branches:

- Tour operator interface – the place where the tour operator logs in and fully controls his projects, inventory, prices, packages, offers, links, penalties, reservations, invoices, reports etc. All setups the tour operator needs are made in this interface; basically manages the whole application.
- Selling platform – the selling interface, opened to the resellers to login into their accounts in order for them to search for services, book, manage reservations, issue travel documents, manage proforma invoices from the tour operator and extract reseller reports. The selling interface has 2 front office interfaces, one for tailor made reservations (travel shopper) and one for static packages reservations.

The system is supervised by a top level Administrator which monitors all actions ensuring smooth operation of the entire application.



Tour operator interface



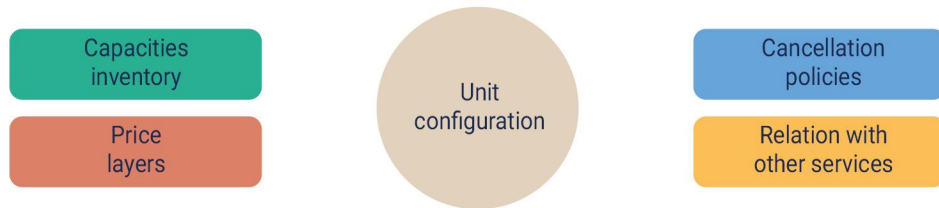
Reseller interface

DATA STREAM AND COHERENCE

All data issued inside AIDA flows into a single secure and coherent stream, without leaks. No user can manually interfere inside the stream, except by using the controlled inputs. Each phase of the workflow is strictly dependent on the others. This ensures consistent reports and operations security.

PROJECTS AND SERVICES

The tour operator joins multiple services under the same group, called project. Inside each project can be added accommodation services, transportation services and other services. Each of these 3 types are treated differently by the application in respect to their conceptual differences.



Each service added must pass all the setup stages before going to sale. If all is completely setup, the service is put on sale and the resellers can make reservations.



SERVICE STATIC PROPERTIES

Each service type has static properties.

Accommodation services

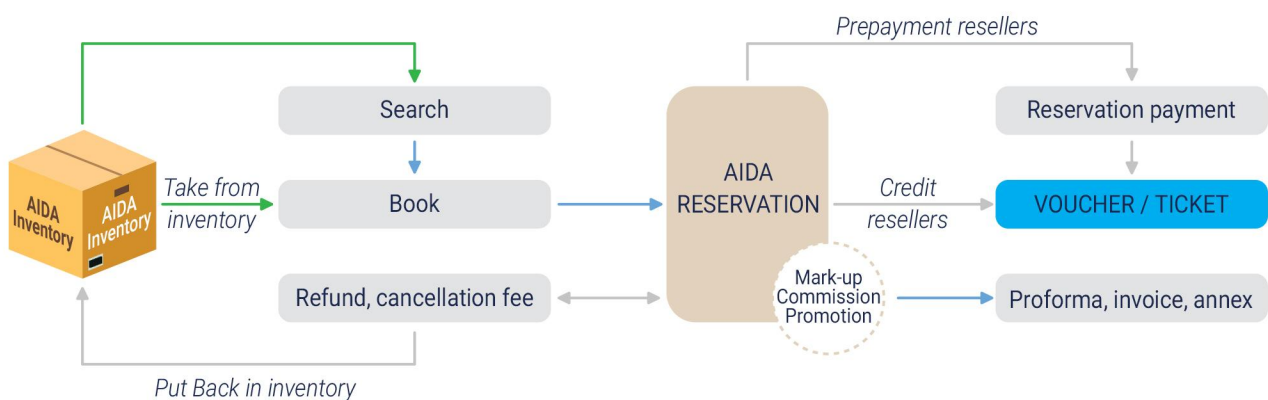
- Types of guests the accommodation unit can accommodate
- Types of rooms the accommodation unit has
- Allowed rooms occupancies

Transportation services

- Departures and itinerary
- Vehicles maximum capacities

INVENTORY

- Define capacities and availability in each day of the month, for all months which overlap the service lifespan
- Use general rules to define large intervals, treat exceptions at day level
- Day level inventory breakdown for each room type or transportation segment/subitinerary
- Intuitive and highly usable interface
- Browse among the calendar and select each component at day level
- Manage check-ins and stay lengths



Projects :: Project components

Dashboard | Globe | Units | Projects | Special offers | Reservations | Resellers | Suppliers | Documents | Reports | AIDA.WS | Admin

Projects management | Project components | Reports | Package catalog

Package categories | Product rules | Accommodation rate types

Project components AMERICA LATINA 2015

SERVICE: NH City & Tower Subservices: Sup. Half Board NH City & Tower | Cina privata NH City & Tower | Mic dejun NH City & Tower Status: On sale

Active months

Manage capacities

Shared inventory services

• NH City & Tower, Hotel 5

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
01-dec-2014 Double Standard with bed and breakfast 8/10 Junior Suite Pool View with bed and breakfast 0/1 Family Room Garden View with bed and breakfast 2/3	02-dec-2014 Double Standard with bed and breakfast 8/10 Junior Suite Pool View with bed and breakfast 0/1 Family Room Garden View with bed and breakfast 2/3	03-dec-2014 Double Standard with bed and breakfast 8/10 Junior Suite Pool View with bed and breakfast 0/1 Family Room Garden View with bed and breakfast 2/3	04-dec-2014 Double Standard with bed and breakfast 8/10 Junior Suite Pool View with bed and breakfast 0/1 Family Room Garden View with bed and breakfast 2/3	05-dec-2014 Double Standard with bed and breakfast 8/10 Junior Suite Pool View with bed and breakfast 0/1 Family Room Garden View with bed and breakfast 2/3	06-dec-2014 Double Standard with bed and breakfast 8/10 Junior Suite Pool View with bed and breakfast 0/1 Family Room Garden View with bed and breakfast 2/3	07-dec-2014 Double Standard with bed and breakfast 8/10 Junior Suite Pool View with bed and breakfast 0/1 Family Room Garden View with bed and breakfast 2/3
08-dec-2014 Double Standard with bed and breakfast 10/10 Junior Suite Pool View with bed and breakfast 0/1 Family Room Garden View with bed and breakfast 3/3	09-dec-2014 Double Standard with bed and breakfast 10/10 Junior Suite Pool View with bed and breakfast 0/1 Family Room Garden View with bed and breakfast 3/3	10-dec-2014 Double Standard with bed and breakfast 10/10 Junior Suite Pool View with bed and breakfast 0/1 Family Room Garden View with bed and breakfast 3/3	11-dec-2014 Double Standard with bed and breakfast 10/10 Junior Suite Pool View with bed and breakfast 0/1 Family Room Garden View with bed and breakfast 3/3	12-dec-2014 Double Standard with bed and breakfast 10/10 Junior Suite Pool View with bed and breakfast 0/1 Family Room Garden View with bed and breakfast 3/3	13-dec-2014 Double Standard with bed and breakfast 10/10 Junior Suite Pool View with bed and breakfast 0/1 Family Room Garden View with bed and breakfast 3/3	14-dec-2014 Double Standard with bed and breakfast 10/10 Junior Suite Pool View with bed and breakfast 0/1 Family Room Garden View with bed and breakfast 3/3
15-dec-2014 Double Standard with bed and breakfast 10/10 Junior Suite Pool View with bed and breakfast 1/1 Family Room Garden View with bed and breakfast 3/3	16-dec-2014 Double Standard with bed and breakfast 10/10 Junior Suite Pool View with bed and breakfast 1/1 Family Room Garden View with bed and breakfast 3/3	17-dec-2014 Double Standard with bed and breakfast 10/10 Junior Suite Pool View with bed and breakfast 1/1 Family Room Garden View with bed and breakfast 3/3	18-dec-2014 Double Standard with bed and breakfast 10/10 Junior Suite Pool View with bed and breakfast 1/1 Family Room Garden View with bed and breakfast 3/3	19-dec-2014 Double Standard with bed and breakfast 10/10 Junior Suite Pool View with bed and breakfast 1/1 Family Room Garden View with bed and breakfast 3/3	20-dec-2014 Double Standard with bed and breakfast 10/10 Junior Suite Pool View with bed and breakfast 1/1 Family Room Garden View with bed and breakfast 3/3	21-dec-2014 Double Standard with bed and breakfast 10/10 Junior Suite Pool View with bed and breakfast 1/1 Family Room Garden View with bed and breakfast 3/3
22-dec-2014	23-dec-2014	24-dec-2014	25-dec-2014	26-dec-2014	27-dec-2014	28-dec-2014

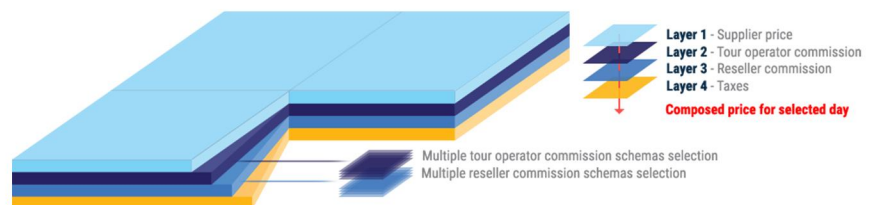
PRICE LAYERS

AIDA uses a very comprehensive module for price definition which can cover basically all possible scenarios. All price components can be defined individually:

- Supplier price
- Reseller commission
- Tour operator commission
- Taxes

Using the calendar view, each of them can be broken down per days ensuring definition at maximum level.

The reseller's commission and tour operator's commission permits multiple schemas, with different values, for different activation intervals. This empowers the tour operator to easily switch between promotional and high season schemas, better motivating the reseller to buy its services.

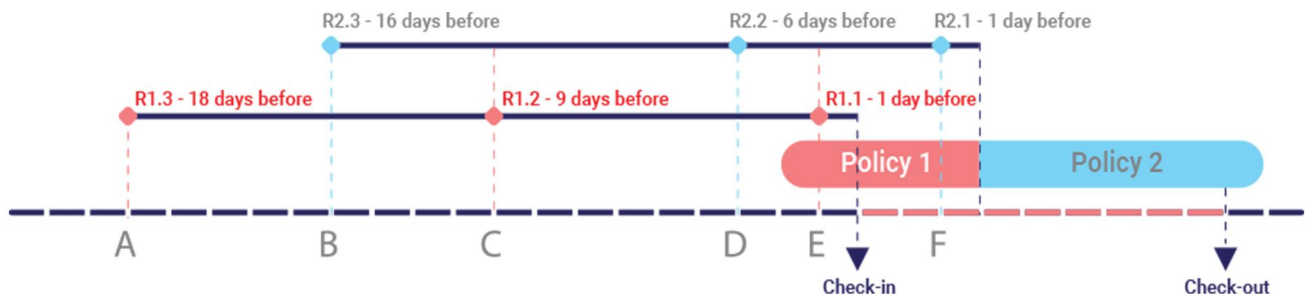


When calculating the price, AIDA overlaps the layers for each day, adds the corresponding values and outputs the result. The reservation price is obtained from the prices for each day.

CANCELLATION POLICY

The tour operator can define cancellation policies for each of its services or packages. The penalty can be defined as percentage of service value, fixed amount or number of nights.

Multiple rules can be added to a single cancellation policy.



SELLING RESTRICTIONS

Certain links can be added between services to ensure some selling targets. The tour operator can join multiple services by linking them with a mandatory link. This way the services will only be sold together. The same way the tour operator can link the services with optional status, only to recommend some options to the reseller.

STATIC PACKAGES

Fixed component packages can be built based on accommodation, transport and other services. Static packages can be:

- Tours – built around a transportation service, such a package has multiple destinations with multiple accommodation units. Multiple additional services can be added to the package, either mandatory or optional

- Holidays – built around the accommodation service, these packages have a single destination, the location of the accommodation service. Multiple additional services can be added to the package, either mandatory or optional

Dynamic packaging

Another way to book services with AIDA is by adding each travel service into the shopping basket. The customer chooses accommodation, transport and other services and builds his own custom package, based on the links, rules and restrictions the tour operator sets up. This way of creating virtual links among the services brings a great flexibility to the tour operator, which can model the dynamic packages on the fly, by adding/removing restrictions among services while on sale.

The packages are only virtually created and can be broken down at any moment, allowing live commercial strategies changes.

RESERVATIONS

AIDA manages the reservations and their status; auto cancels the ones due to enter cancellation policy and keeps track of e-mail alerts to both resellers and tour operators.

The application's main goal is to do as much work with as little operator assistance as possible. That is why most of the processes are automated.

SELLING PLATFORM

Reseller accounts

The resellers must login into the selling platform using their credentials from the tour operator. Within this interface they can search and book reservations, manage their reservations and extract the proforma invoices and extract vouchers when reservations are ok.

They can create users and set permission levels to access their account, make reports based on their activity using the reporting tools for resellers and even set auto e-mail alerts according to their specific activity.

The resellers can book on credit or on prepayment, according to account type. If on credit, the voucher can be issued immediately, before any payment. The resellers on prepayment must pay for each reservation before extracting the voucher.

Booking and shopping basket

AIDA uses a very intuitive booking form. Using simple steps, the reseller can easily book one or more services from one or more tour operators to which it is affiliated.

- Search for service – the application searches for available services, according to reseller searching criteria.
- Add service to basket – once searched, the service offer is configured and then added to the basket.
- Add passengers to the reservation – the reseller must specify the passenger names and then associate them with the services on the reservation.
- Verify the selling restrictions – AIDA signals if there are any mandatory or optional links and restricts the reservation accordingly.
- Finish the booking – if all criteria are met, the reservation can be completed and added to resellers reservations list and at the same time at the tour operator's reservations list.

The screenshot displays the 'HOTELS ACCOMMODATION SEARCH' interface. On the left, a search form includes fields for Destination (Madrid), Time period (01-12-2014 to 08-12-2014), Check-in, Check-out, Duration (7), Occupancy (1 room, 1 adult, 0 children), and a Text filter. Below the form are 'Additional filters' and a 'Search' button. The main area shows search results for 'Madrid / 01-12-2014 - 08-12-2014 / 2 adults' with 3 results. The first result is 'Rafael Ventas' (4 stars), starting from 720.00 EUR. It lists two options: 'Standard - Pay 5 stay 7 - Standard' (720.00 EUR) and 'Standard - Standard' (1.005.00 EUR). The second result is 'NH City Madrid' (4 stars), starting from 819.00 EUR, with an 'Early Booking - Early Booking' option (819.00 EUR). Each option has a 'Select' button. The interface also shows navigation tabs at the top: Dashboard, Tailor-made, Packages, Hotels search, Reservations, and Admin.

Packages selling interface

This interface is specially built for fast reservations, on static packages only. With just a few simple steps, the resellers can book a package created by the tour operator.

There are 5 steps in order to complete a booking:

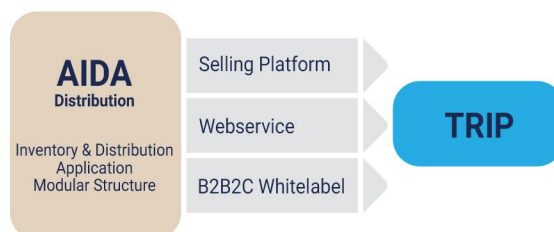
- Theme and package selection, availability search form
- Available services selection and configurations (whether mandatory or optional)
- Passengers addition on the reservation
- Passengers associations with the selected services
- Cancellation policy, terms and conditions acceptance and booking confirmation

WEBSERVICES

As inventory application, the main scope of AIDA is to keep track of tour operator inventory, with availability, pricing and policies that he sets up.

To offer maximum flexibility in distributing the products from inventory, webservices were built. Webservices commanding AIDA inventory can be used in 2 ways:

- Design a custom made front office selling interface. For a special demanding reseller or for own agents, or even for his own site, the tour operator is free to build its own selling interface
- Integrate AIDA inventory with 3rd party distribution systems. Large distributors can be interested in reselling tour operator's products. TBS can also be a distribution channel of AIDA. AIDA can play the role of the wholesaler



ADMINISTRATIVE TOOLS

Documents template manager

AIDA includes an extensive documents design tool, allowing the tour operator to create multiple layouts for the documents, in order to adapt to resellers and market needs.

The document data can be overlaid on multiple layouts, designed inside AIDA.

A proforma invoice, reservation details, voucher can look different according to the documents layouts.



E-mail alerts

AIDA can send e-mail alerts to the tour operator when certain events are triggered, like:

- New reservation was added
- Reservation was canceled
- Reservation was confirmed
- Request amendment
- Reservation due to enter cancelation policy
- Request reservation confirmed
- Voucher was generated
- Capacities limit alert

Operations log

The system logs all operations, from the internal commands and communication with the resellers to messages exchanged with the distributors. AIDA records the date and time, message content and event description. This way the tour operator is always in control of its activity, being able to search into the log at any time.

Reporting tools

The tour operator can define his reporting templates and the extract comprehensive reports, depending on the selected source. The reports are very useful for prediction, when planning long term strategies. The tour operator can use data mining to extract important information related to its business activity.

ABOUT DCS PLUS

● dcs plus is a leading travel technology company, committed to designing and developing enterprise technology solutions for the travel and tourism industry. The company designs and builds adaptable, affordable, and cutting-edge tools and services for travel and tourism professionals. dcs, founded in 2002, operates in 42 markets around the globe with partners worldwide, including Amadeus IT group and Lufthansa City Center.

INTERESTED TO FIND OUT MORE?



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