AIMS

The Fully and Truly Integrated Suite of Products for
CREW MANAGEMENT
OPERATIONS CONTROL
COMMERCIAL PLANNING

Yellow Modules = Requested by PACE
Green Modules = Requested by MLW

Functionality List - Add-On Modules
# AIMS – Functionality List of Add-on Modules

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Crew Management Related Add-On Modules

Automatic Crew Pairing Generator

The purpose of the Pairing Generator is to automatically generate legal and cost effective crew pairings from a commercial plan (flight schedule) while taking crew preferences into consideration.

Provides considerable cost savings through:

- Reduction in crew resource requirements
- Reduction of hotel costs
- Reduction of deadheading costs
- Reduction of allowance expenses

Functionality includes:

- Generation of pairings for a variable number of days, from 1 day up to an entire 6-month season.
- Generation of a weekly pairing solution or fully dated solution taking in consideration carry-in’s and carry-out’s from previous / next periods as well as any schedule variations during the period selected.
- Short, medium and long haul pairing generation.
- User-definable rules that dictate the content and the quality of each pairing
- Optimizer may be set to minimize costs including fictitious costs (penalties that may be applied when something legal but undesirable is scheduled) or, can be set to minimize duty days (when short of crew), even if the solution turns out to be more costly.
- Pairings may contain flights from different aircraft types (multi-rated crew), with provisions to minimize aircraft changes within the same duty period.
- To minimize aircraft changes in the same duty period, pairing construction can be setup to reference the aircraft schedule and have the crew follow the aircraft as much as possible.
• Support for multiple crew bases and equalization of workload across crew bases separately for each crew population, taking however into account that crew should stay together throughout each duty period, thus minimizing possible delays on the day of operation.

• Generation of pairings for a single crew position, a group (Flight Deck or Cabin) or the entire crew population.

• Coverage of all flight legs with the appropriate crew complement for each type of flight. Construction of additional pairings, where necessary, to cater for crew augmentation and double crew requirements when operating long-haul flights. Report on the coverage of each flight leg.

• Fully legal pairings taking into consideration Government, Union and ‘soft’ rules.

• Airlines operating out of many bases with different crew duty regulations in each base may generate pairings according to each base’s crew duty regulations.

• Option to manually build some initial pairings and then allow AIMS to build automatically all the remaining pairings.

• Ability to manually modify automatically-generated pairings using a graphical Gantt style chart.

• Unlimited number of what-if scenarios. Ability to save, compare, and review automatically-generated solutions after each run.

• Cost calculations for a specific pairing, a group of pairings, by fleet, crew position and period including total operating cost, hotel costs, dead-heading costs and allowances.

• Flight Schedule of other airlines may be electronically fed into AIMS (OAG Flight Guide in electronic format) and used during pairing generation to locate the most suitable flight legs for dead-heading, including preferred carriers. AIMS will also automatically propose ground transport for dead-heading where necessary.

• Crew pairings reports are available in a variety of formats.

• Fully integrated with the AIMS Flight Schedule Maintenance system as well as the AIMS Automatic Crew Assignment and Daily Crew Control systems.
Crew Pairings / Crew Schedule Costing System

Using or contemplating the use of AIMS indicates recognition of the increasing need to develop and further maintain a cost effective strategy that will manage valuable aircrew resources within the overall airline costing policy and structure.

AIMS can offer a Crew Cost Analysis Program that will enable airlines to identify and calculate the crew related costs of individual Crew Pairings and Crew Schedules.

The AIMS – Crew Pairings / Crew Schedule Costing System enables a cost factor to be entered for applicable basic crew rates, hotel (including transfers) costs, deadheading costs (including ground travel), allowances and various overtime payments. These factors can then be considered in the cost calculation process for Crew Pairings (Routes). Crew position costs per pairing or a full crew complement cost is also possible. A crew schedule cost analysis incorporates all routes in the schedule and any other duties that are considered as crew cost-related. Standard AIMS selection criteria enable calculations to be made and reported for a selected time period by base, aircraft type, crew position, region and individual route. Evaluation of the crew-related cost of the flying program is therefore made possible. Crew Schedules may be run, then costed, amended, re-run and re-costed as required. By running reports based on pre-published schedule information and again after the roster period when actual information is in the system, a further cost comparison can be made.

<table>
<thead>
<tr>
<th>Route</th>
<th>Dur Date Period</th>
<th>Total</th>
<th>Crew</th>
<th>DeadHead</th>
<th>Hotel</th>
<th>Cost</th>
<th>Transfers</th>
<th>Allowance</th>
<th>Total</th>
<th>Crew</th>
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</thead>
<tbody>
<tr>
<td>105</td>
<td>/2 05.10.1992-19.10.1992</td>
<td>1------</td>
<td>3 1,419</td>
<td>2,064</td>
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<tr>
<td>106</td>
<td>/2 26.10.1992-06.10.1992</td>
<td>1------</td>
<td>1 478</td>
<td>688</td>
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<td>56</td>
<td>716</td>
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<tr>
<td>107</td>
<td>/5 05.10.1992-05.10.1992</td>
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<td>3 1,754</td>
<td>1,212</td>
<td>1,073</td>
<td>36</td>
<td>2,046</td>
<td>8</td>
<td>651</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>/5 12.10.1992-19.10.1992</td>
<td>1------</td>
<td>2 3,524</td>
<td>2,736</td>
<td>960</td>
<td>72</td>
<td>4,092</td>
<td>8</td>
<td>11,38</td>
<td></td>
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<tr>
<td>113</td>
<td>/7 26.10.1992-26.10.1992</td>
<td>1------</td>
<td>1 2,556</td>
<td>2,688</td>
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<td>96</td>
<td>3,564</td>
<td>8</td>
<td>827</td>
<td></td>
</tr>
</tbody>
</table>
The AIMS Crew Pairings & Crew Schedule Costing System enables Cost Factor Entry and Cost Calculations by Crew Pairing and Crew Schedule, for:

**Basic Crew Rates Cost Factors** can be entered for base, aircraft type, crew position and any other category that may have a defined unit cost. Settings allow calculations for each hour of duty and each 24-hour period or partial period away from base. Applicable start and end times for calculations can be set, and ground duties may be optionally included or excluded.

**Hotel cost** is established by ensuring the applicable data is entered for the relevant hotels in the airports database and the Costing module. Room rates, check-in/out times, transfer costs and distances are necessary factors. Default values may also be set for a more generic calculation.

**Deadheading cost** options are derived from the entries in the Crew Costing on specific data for route, carrier and cost as defined by the User. Again, default values allow a more generic calculation method for air and ground transport by sector or per flight hour.

**Allowance Cost** rates may be entered for crew position and apply for selections by hour, 24-hour or partial period away from base or during layover time. A separate setting applies for night stop costs. Applicable start and end times for calculations can be set. More precise calculations can be based on the AIMS Crew Allowance Calculations Add-on module.

**Overtime** payment rates may be set by crew position and may be calculated on a flight or duty hour basis for defined periods and also with a 2-tier structure to accommodate rate changes. Overtime is applicable to crew schedule calculations.

The above factors may be selected individually or by combination, as applicable, for calculations and report functions. Individual airline cost control policy is applied at this stage.
Interactive Voice Response System (IVR) for the Crew

AIMS IVR allows crewmembers 24-hour direct dial access to a series of flight information options and to their personal crew schedule activity for the current and future scheduling periods. This independent access capability for crewmembers is designed to improve internal communications standards, increase the flow of information and reduce the telephone workload of Crew Control and Crew Scheduling Staff. Time wasted waiting ‘on hold’ in these normally busy areas becomes a thing of the past.

In optimizing the security and management of calls, policies determining User access rights may be applied via the IVR customization, while detailed call logging may be used for auditing, monitoring and statistical purposes.

Available Options:

- Crew schedule inquiries for specific dates and selected date ranges.
- Access to crew schedule updates and confirmation of changes.
- Request copy of current personal crew schedule using fax.
- Request copy of current personal crew schedule using e-mail.
- Obtain Crew lists for selected flights.
- Obtain estimated departure time information for their assigned flight and other scheduled flights.
- Crew check-in facility with confirmation of flight departure details.
- Submit requests for days off for future scheduling periods up to 12 months ahead.
- Submit requests for vacation for future scheduling periods up to 12 months ahead.
- Declare Fit/Unfit.
- PBX Integration.

AIMS IVR Caller Access Options

- **Crew Schedule Inquiries**
  From any location and at any time, crew members may have telephone access to their published and most recently updated personal crew schedule using AIMS IVR to check the details of assigned flights, duties and off duty periods. Selection of a specific date or a selected date range is possible. Crew members utilizing this remote and independent access to published and updated crew schedule details should have a significant effect in reducing the number of non-urgent and non-operational calls handled by Crew Control and Administration Management.

- **Access to Crew Schedule Updates and Confirmation of Changes**
  This option creates the opportunity to share the responsibility for advice and confirmation of any change to a crewmember’s schedule. A caller accessing this option will receive all outstanding notifications and be given the opportunity to confirm them. All access activity can be logged and controlled. AIMS can be set to either record or not to record, all changes confirmed by crew using IVR as positive notifications.

- **Requesting a Copy of Current Personal Crew Schedule using Fax or E-mail**
  The latest updated personal crew schedule can be transmitted, upon request using IVR to a listed home or alternative fax number, (including away from home base numbers) and also to the e-mail address listed in crew records.

- **Crew Lists for Selected Flights**
  After accessing IVR, selecting the date and flight number, the caller will receive a crew list readout for the flight. Access can be controlled for security reasons and/or IVR can be personalized by the use of recorded crew names, instead of the IVR standard ID number format.
• **Estimated Departure Time Information for Assigned and Other Scheduled Flights**
  All crew now have the option of accessing the IVR system, prior to check-in, to establish if their assigned flight has been delayed and/or check the latest updated departure times for any other scheduled flight. Using the applicable IVR menu option, ETDs of flights for the current month are provided on the day. Delay monitoring is achievable and future departure information is available.

• **Crew Check-In Facility with Confirmation of Flight Departure Details**
  Check-in at base is registered automatically and flight details are confirmed following IVR access. This facility can, as a User airline option, eliminate the requirement to physically report to a designated point unless an alternative AIMS Check-in facility using swipe card, keyboard or web access is used.

• **Submitting Requests for Days Off**
  Crewmembers are able to submit and automatically record requests for a specific day off or a group of days off on their future schedule using IVR. If the request complies with the defined limits and there is no conflict with User pre-assigned training or other scheduling requirements, the caller will be advised that the request has been recorded. Alternatively, the caller is advised if the request is not accepted or possible. The applicable crew schedule code is automatically entered and flagged on the personal schedule. Management and/or Crew Planning can determine the final approval or rejection of the request before publication.

• **Submitting Requests for Vacation**
  Requests for Vacation are processed in the same way as requests for days off. Management defines the entitlement and duration. If the request complies with the limits, the applicable crew schedule code is automatically entered on the crewmembers schedule for the duration. The caller is advised if the request is recorded, not accepted or not possible.

• **Fit / Unfit Declaration**
  Crewmembers may declare their availability/unavailability to operate for duty, via the IVR Fit/Unfit Declaration facility. Their request must be made within the time limits set down by crewing. The caller is advised if a request has been accepted or rejected. When a declaration has been accepted, Administrative crew are informed via AIMS messaging.

• **PBX Integration**
  The IVR allows the caller to access the Administrative Staff by redirecting the call through the PBX to the Crew Call Center (Grouped lines where crew services are supplied).

• **Crew Messaging System**
  Administrative or operational staff can issue messages to a specific crewmember or group of members. The messages are announced to the crew upon accessing the IVR facility.

• **Reports and Recording**
  Comprehensive statistics on call activity such as who called, when, why, peak use by time/day, most frequently used options and average length of call.
Interactive Voice Response System (IVR) for the Public

As an extension of the AIMS IVR system for use by aircrew, the creation of this information database also allows AIMS IVR to provide information to the public.

- **Flight Departure and Arrival Information for Simple Access by Passengers and the General Public.** Using IVR, airlines can provide information on flight departures and arrivals in a format for public use. Passengers and members of the general public can access the following information from any telephone by dialing an advertised number:
  
  - **Flight Number selection** – The called has to enter the flight number and a date in order to receive information for a relevant flight.
  
  - **Departure/Arrival airport codes selection** – Information for the caller can also be received by dialing the corresponding numbers/letters on the dial pad, i.e. for LHR → dial 547).
  
  - **First four letters of the airport name for both DEP/ARR** – Once again, this information is provided by dialing the corresponding numbers on the dial pad, i.e. LONDON → dial 5663).

Note: When the caller presses the letters of the airport code or name, the system is intelligent enough to produce all possible combinations and then match them with the flight schedule so that the caller receives the information that they have requested.

The AIMS IVR PUBLIC system also provides the ability to produce Statistics for the way it has been utilized by the public. Some of the available statistics can include, average calls per hour, calls per day, calls per line and call durations. The following screen shot displays the ‘average calls per hour’ for a day.

![Statistics for IVR PUBLIC](image-url)
Crew Briefing System (CBS)

To simplify any task and improve any decision making process, one basic principle is to have all relevant information prepared in advance. The benefits of providing a comprehensive preflight information package, prepared simply and delivered upon request will be evident, when you include the AIMS Crew Briefing System module as an integrated option within AIMS.

The AIMS Crew Briefing System information flow begins with the creation, accumulation and correlation of memos relating to flights, airports, sectors, aircraft, passengers and crewmembers from information input by Users and supplemented with data held in the AIMS database. The CBS will then deliver a comprehensive Crew Briefing Report printout, containing all the relevant User-generated memos and AIMS information for Captains and Pursers at or before check-in time for each flight.

The simple functionality of the AIMS CBS provides for the creation and storage of the following:

Memos by Type, which specifically relate to the many AIMS information elements of a flight operation such as:

- Flights
- Airports
- Aircraft
- City pairs (sectors)
- Cockpit Crew
- Cabin Crew
- Fuel
- Passengers

Also for general procedures and additional User Defined elements such as:

- Engineering
- Operational
- Nav./ Performance
- Technical
- Catering
- Ad-hoc flights
- Commercial
- Special
- General

Many other items of information considered as relevant to the operation of any flight are also covered.

Memos that contain a date range and time period defined by the User to relay information for specific or general information, for example:

“Due to industrial action, no engineering support available for morning departures at YYY XXX from 01Jan to 03 Jan incl.” or “On all flights arriving LHR after 1500 for the summer period include the following P.A. for connecting Pax....”

Memos that hold for flights of a particular duration, for example:

“To avoid fuelling delays at YYY XXX all B757 flights to tanker fuel on outbound sector when return sector exceeds 3 hours or “On B757, B767 sectors under 2 hours no second beverage service required.”

Memos that can be sorted and reported, for example:

By date and type of memo, for reference by AIMS Users.

And then correlate memos and AIMS information, to create, define and deliver:

A comprehensive Briefing Report database that includes all memos defined by type and containing relevant information, available at check-in time for Captains and Pursers. All standard information from AIMS data for schedule, airport and aircraft for the flight sequence may be included to create a total information package. Configuration options enable the User to format the reports according to selected information content and to create and define them specifically for delivery to Captain/Cockpit and/or Purser/Cabin. Delivery is activated by crewmember entry of his/her ID number or alternatively, reports can be User-prepared and issued at check-in.

A more efficient automatic delivery is available when AIMS ‘Web Access’ Crew Access System or ‘Fast Card” Automated Crew Check-in System is chosen. Crew Briefing Reports can be automatically delivered as an optional requirement during the automated crew check-in function of these modules.
Sample Crew Briefing Report

Global Airways

Flight Deck Briefing Report

OP  Flight  Dep    Arr    STD     STA     DAY       TP
116   21 Jul 1998   B757
   116     MAN  REU  16:30   18:40   21 Jul     CH
   117     REU  MAN  19:40   21:55   21 Jul     CH

Airfield Category : Cat B
Fuel Index : B36/A33
Fuel Supplier: REPSOL
Handling Agent
NAME : Servisair PLC
TEL. : 499 6170 / 6150
SITA : MANAPSX
FREQ : 130.60

Curfew Times
01.04.98 01.11.98
01.04.98 01.11.98

Comments:
Authorisation for extend only given by Manager Ops Control.

Required Documents
General Declaration Required: Y
Passenger Manifest Required : Y
Landing Cards Required : Y

No other documents are required.

AIRPORTS
(08Oct1997-31Dec1998)  MAN Bond is open 24 hours in Summer and Winter.
Bond Duties – when rostered, go straight to the Bond and not to Traffic.
Parking is available at the Bond.

AIRPORTS
(01Nov1997-31Dec1999)  To benefit from earlier ATC radar vectors on some SIDs, please programme
VNAV for MAX ANGLE CLIMB SPEED to alt 4000' instead of 3000' AAL on all departures.
AIMS – Functionality List of Add-on Modules

---

**REU**  
**REUS**  
UTC Diff (Summer/Winter): 2:00/1:00

---

Airfield Category: Cat B

Diversion alternates: BCN GRO

---

**Fuel Index:** B36/A33  
**Fuel Supplier:** REPSOL

---

**Handling Agent**  
NAME: Iberia Airlines  
TEL.: 00 349 77 753790  
SITA: REUKKIB  
FREQ: N/A  

**Global Rep.**  
Med Aero Services  
00 349 77 773715  
REUAPDP REUASXH  
N/A

**Caterer**  
Through MedAero

**Hotel**

---

**Curfew Times**

<table>
<thead>
<tr>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
</tr>
</thead>
<tbody>
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<td>00:01 06:30</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>01.04.98 01.11.98</td>
<td>21:00 24:00</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Comments:**
Apply to Duty Operations Controller for extension.

---

**Required Documents**

<table>
<thead>
<tr>
<th>General Declaration Required</th>
<th>Y</th>
<th>N</th>
<th>No of copies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger Manifest Required</td>
<td>✓</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Landing Cards Required</td>
<td>✓</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

No other documents are required.

---

**AIRPORTS**  
(01 Nov 1997-31 Dec 1999)

When inbound Reus crews call Med Aero Services in Gerona on 131.67 to relay messages.

**AIRPORTS**  
(14 Feb 1998-31 Dec 1999)

This is a Category B Airport

---

**GENERAL**  
(06 Oct 1997-30 Apr 1999)

Distribution of 1/3 trays on B757
If any catering is loaded on 1/3 trays, it will be loaded in 5 carts and 2 boxes – the distribution of these will be as follows.
A/C with Toilet Fwd
Fwd – 122 Pax

---

**GENERAL**  

Boarding Pax downroute
Reminder: When Boarding Pax downroute where steps are used, there should be two crew members at the bottom of the steps at all times. A320 One crew member at the bottom of the steps at all times. When disembarking Pax downroute and in the UK, where steps are used, there should be two crew members at the bottom of the steps at all times, A320 one crew member.
Leave Management System

As a direct consequence of non-effective aircrew Leave planning or Sick Leave monitoring, two strategically important factors of airline operations are left vulnerable. Firstly, by flight schedule demands with insufficient crew availability to meet known and variable requirements and secondly, by the negative impact on aircrew morale and aircrew-management relations, when leave cannot be granted or is disrupted. Singly or combined, both situations can have far reaching implications for the overall performance, productivity and eventual costing and profit levels of any airline.

The AIMS Leave Management System provides the opportunity to improve and control leave planning and allocation for a three-year time frame including past, current and future. The User defined Leave categories store information for taken, granted and planned leave in personal entitlement and allocation records. Because the Leave categories are User-defined, the module may be used to monitor and assign any type of leave, i.e. Annual Leave, Sick Leave, Study Leave. These can be displayed for any aircraft type, crew group or base in text or graphical format. Periods of leave are easily and quickly assigned to any selected crewmember using this application. All leave periods using other integrated AIMS modules such as ‘e-Crew’ or ‘IVR’ or directly by Users, are recorded and displayed. Also crewmembers can make bids for the leave periods that they want and these can then be assigned automatically according to user-defined parameters. Variable limit lines can be set for defined periods, as indicators for a desired upper limit to be used during the automatic assignment process, or alternatively as a guideline for manual leave allocation. Planning conflicts can be identified well in advance from a graphical chart and also accrued leave implications can be assessed.

To see the functionality that is currently available in the standard core module that partially covers these functions, then please refer to the Vacation Management Section of the Crew Planning Core Module document.

Functionality includes:
Maintenance of Leave Information
For each crewmember, a rolling three year period covering past year, current year and next year can be input according to defined starting dates and subsequent calculation periods. Figures are automatically calculated from assigned leave dates for leave taken and leave booked (granted or approved/planned).

Bidding
Crewmembers may bid for Vacation in the applicable period (Summer, Winter or 365 Day) using the e-Crew Vacation Bidding function. Two types of bid maybe recorded ‘5 days starting on 01/01/1993’ or… ‘5 days starting anywhere in the period 01/01/1993 – 01/31/1993’ – A ‘Preference’ may also be applied to the bid in order to indicate to the system during the Automated Vacation Award process the preferred Vacation time of the applicable crewmember.

Starting On

Starting anywhere in the period

Automated Vacation Award
This process awards the vacation bids from crewmembers that have either been entered manually (Crew Planning) or by Crewmembers using the e-Crew Add-On module. The assignment of the Vacation bids is in accordance with user-defined parameters such as Seniority, Years of Service and ‘First Come/First Served’
Simple Allocation Procedure
Using separate allocation codes, the module distinguishes vacation granted/approved and vacation planned/requested. Similarly, codes may be used to differentiate between sick leave with or without a certificate, paid or unpaid. The individual record displays a 13-month period scrollable over two years.

System Controls
To warn when the allocation of leave exceeds the defined individual entitlement allowing even Day to Day Operations to approve ad-hoc requests without detriment to the Airlines’ operations, thus further reducing the Airlines leave commitment and improving crew relations. Warnings are issued for any type of leave categorized as being entitlement-related.

Flexible Leave Rules
In addition to the System Controls above, additional rules may be defined such as “Crew of Category ‘X’ not to be assigned more than ‘Y’ days of leave,” “Crew who take leave outside the busy summer season are entitled to ‘X’ days more leave” and much more.

Multiple Leave Type Tracking
Keeping track of totals up to 4 separate leave types, such as annual leave, privilege leave, casual leave, sick leave with and without a certificate, etc.
Sick Leave Management
This has been simplified by placing crewmembers that require monitoring into an appropriate Leave category that will easily identify possible abuses of work practice. Entitlement/Restriction rules combined with User defined Messages allow for Crew Control to be informed of any necessary action (i.e. ‘Advise Flight Attendant Management’)

Leave Allocation or Input Display
A Graphical Chart displays the peaks and troughs that indicate where situations exist to be able to achieve a more balanced spread of planned Leave. The chart displays can be selected for separate or grouped Leave types by base, position and aircraft type.

The allocation function for individual crew is active within the chart display, a simple double click on a chart bar will display the list of crew allocated leave, granted and/or planned on that day.
AIMS – Functionality List of Add-on Modules

Distribution Graphical Chart
Displays leave taken, booked (granted or approved/planned) and owed (outstanding entitlements) and identifies if the airlines' leave commitment is likely to conflict with any flight schedule and crew training commitments. The chart may be used to monitor trends ie: Historical Sick Leave information.

Report Function
Shows status figures for each of the leave categories taken and booked with the total for each category owed with selections for/by base, position and aircraft type.
Automated Crew Training Planning & Tracking

A dynamic, flexible and User-friendly management tool specifically designed to manage all phases of Crew training and available training resources of an Airline. Innovative screen design and functionality provide for a highly configurable module, which enables the User to define and modify a course syllabus or available training resource with ease.

To see the functionality that is currently available in the standard core module that partially covers these functions, then please refer to the Training Management Section of the Crew Planning Core Module document.

Functionality includes:

- Setup of training facilities (simulators, classrooms, etc) together with availability (days/time of day) for each one.
- Ability to block certain periods of simulator availability due to CAA/FAA inspection visits, Maintenance, etc.
- User-definable courses (new-entrant, conversion, upgrade, refresher, etc) together with a detailed course syllabus for each one of them.
- Creation of courses on a Gantt Chart with User-selected starting dates, and allocation of Crew numbers or Crew names (Trainees) to each course.
- Automated assignment of all ground-training duties on the Crew schedule of each Trainee as well as the associated Trainer based on the course syllabi (ground school, simulator, etc).
- Automated assignment of recurrent route/line checks.
- Automated assignment and tracking of line training.
- Instructor and simulator availability planning over a period. Warnings issued when planned training exceeds Instructor and simulator availability.
- Graphical simulator/classroom resources display. User may add/remove Crew to/from each training session, which automatically updates Crew schedules. Similarly, when adding or removing training duties to the Crew, the graphical simulator/classroom resources display gets updated.
- Audit trail of changes made and warnings when Instructors or Trainees are not assigned to a training session or when a required training is lost.
- Booking and tracking of ‘third party’ simulator usage, including statistics.
- Training requirements, away from a Crewmember’s home base, are handled by automatically locating and assigning positioning sectors to and from their base, which can be based on the OAG Flight Schedules.
- Ability to assign third party Instructors and Trainees, as well as Observers/Inspectors on any training session together with memos.
Upon completion of each training session, Instructors may access AIMS via the Internet (e-Crew), and record the training results (pass/fail/incomplete, remarks and other information). Upon completion of the form, AIMS automatically calculates the new expiry date for the trainee if they passed the course. (The Trainee Assessment Forms is a separate module. Please see the relevant document for further details).

- Comprehensive report functionality in a variety of formats including:
  - Detail training schedule report separately by Instructor, Trainee, or Training facility
  - Required Vs Achieved Training
  - Training Failure Vs Pass Statistics
  - Instructor Utilization Statistics
  - Training Costs Statistics

- Fully integrated with the AIMS Crew Planning and Crew Tracking Systems.

*Under development.
Automated Crew HOTAC & Travel Management

A module that is essential for managing one of the busiest departments within an airline. The system allows the Hotel & Transport Department to send out bookings via e-mail, fax or SITA directly to the Hotel, Airline, Coach, Hire Car or Taxi Company. Once bookings have been made, the system will then allow the department to monitor all changes made by Crew Scheduling. It also provides an audit trail of all changes to bookings with a status for each booking along with comments, booking reference number, payment method and/or invoice number.

To see the functionality that is currently available in the standard core module that partially covers these functions, then please refer to the Hotel and Travel Management Section of the Crew Planning Core Module document.

The Crewing Department is no longer required to ensure the Hotel/Transport Department is advised of roster changes, flight cancellations or changed training requirements as the changes are now available immediately to the HOTAC & Travel people with the action required by showing the changed status attributed to each individual booking. This will allow the department to control the Hotel/Bookings in a cost effective manner by reducing unnecessary costs that can be caused by the failure to cancel bookings, last minute bookings, late name changes, exceeding contracted rooms at hotels etc.

There is additionally an option that allows the Airline to setup the costs and currency associated with each Hotel and Transport provider (via citypair) and automatically inserts the costs into the booking while also calculating the GST (if applicable) for each booking. Account codes (as defined by the Airline) may be assigned to specific crew schedule or training codes.

A number of reports are available to facilitate in the management of Day-to-Day bookings and for the use of the Accounts department.

The Airline is able to report on bookings based on:

- Account Codes
- Reservations Status
- Supplier
- Bookings with or without Invoice Numbers
- Reference or Locator Number
- Payment Method i.e. Crew Credit Card, Cash, HOTAC Credit Card, Invoice
- Cancellation Method
- Penalty Payment (charge for late cancellation)
- Individual crewmember or crew group
Crew Allowance Calculations

Crew allowances are a major factor in the airline’s cost structure. AIMS has a comprehensive and flexible approach that provides the airline with a management and control system for controlling this vital area.

If an airline also selects either the Pairing Generator or Crew Cost Add-on modules then the Crew Allowance module is directly linked to those Add-on modules.

The AIMS Crew Allowances Calculations allows for:

Different types of allowances that may include:

- Time away from base
- For each hour at a layover station
- By meal break
- Domestic or International flights
- Training flights and ground duties
- Deadheads
- Compensatory days
- Night duties
- Number of sectors flown

This module provides a flexible approach to Crew Allowances that gives the airline a sure method of controlling this vital area.
This can be done not only by aircraft qualification and position but also by crew base and category of crewmember. AIMS allows Users to obtain comprehensive reports on allowances, which can be sent to a text file, fax number or e-mail address.
APIs Forms Transmission

The APIS Forms Transmission application provides airlines with a facility to transmit Advanced Passenger Information System (APIS) messages for crew in either US or UN EDIFACT format to Border Control Agencies for any country that requires such information. As of early 2007, this is a requirement for airlines operating in and out of, or, overflying the U.S., Canada, Mexico, Australia and New Zealand, while many other countries are in the process of adopting similar procedures.

Customs Requirements

- The requirement by the U.S Immigration Services became law on 31 December 2001. Canada, Mexico and other countries have also implemented this requirement.
- It allows Immigration staff to check crewmembers’ biographical information (name, date of birth, etc.) by performing database queries on their Advanced Passenger Information System (APIS).
- The crewmember information needs to be submitted to APIS prior to departure of the aircraft and is transmitted to a specific SITA address, e-mail address or FTP site in EDIFACT (US or UN) format.
- In addition to the APIS Manifest the requirement is to have previously sent also a Master Crew List (MCL) which contains crew biographical information. If any such crew biographical information changes, a new MCL must be sent for these crew.
- US Immigration and the Transportation Security Agency (TSA) require airlines to supply and maintain a Master Crew List of biographical data for all crewmembers that may fly to, from or overfly the USA.
- Australia & New Zealand have adopted a slightly revised version of APIS called APP, which is sent to the Authorities in email format only. AIMS supports the APP as well for all airlines operating in and out of Australia/New Zealand.
Functionality

- The AIMS APIS forms transmission application allows the User to transmit a message either manually or automatically.
- Manual transmission allows for the selection of a particular flight or a set of flights, followed by transmission of the form to a SITA, e-mail or FTP address selected by the User.
- Automatic transmission allows the application to monitor flights due to depart within a time interval specified by the User and automatically generates and sends the forms to a SITA, e-mail or FTP address predefined again by the User.
- The Master Crew List is generated automatically and transmitted to a specified e-mail address. Changes to crewmember biographical data can be transmitted manually, after several changes have been accumulated, or can be set to transmit the MCL message automatically when the data is added, changed or deleted.
- The User has the option to setup the APIS forms transmission to any country that may require airlines to conform to the regulations in the future.
- Due to recent requirements from Spanish Authorities to receive APIS Manifests from any non-Schengen country, AIMS has been adjusted to handle that too, without sending any manifests when the flight is between two Schengen countries.
- If an APIS Manifest has been transmitted on time (usually two hours prior to flight departure) and for some reason there is a last minute crew change (e.g. half hour prior to departure), AIMS will automatically send a new APIS with the data of the new crew list.
- To ensure that APIS Manifests do get generated and sent all the time in order to avoid fines from the Authorities, in case for any reason the AIMS Automated APIS engine is inoperative and no messages are generated, AIMS has adjusted the Aircraft Movement Control application, which is usually monitored around the clock by Ops Controllers/Flight Dispatchers, to issue a warning if a message has not been generated on time, so that Ops Controllers can restart the APIS engine, or manually send the message.
- Flight Crew Manifests (FCM or APIS Manifest), apart from Operating crew may also include dead-heading crew

APIS Jumpseaters

- Apart from crew the FCM may also include jump-seaters (Engineers, Dispatchers, Load Masters, Handling Agents, etc) who are maintained in a non-Crew List and for which MCL Manifests are generated too.
- Jump-seaters are selected by the Ops Controllers and when it’s time for the FCM to be generated, jumpseaters are automatically included in it.
- As jump-seaters can be classified also the crew who neither operate nor deadhead and fly on non-airline business.
Crew Exposure to Cosmic Radiation

This AIMS module tracks the amount of crew exposure to Cosmic Radiation when flying above the altitude of 25,000 feet.

The term Cosmic Radiation refers to a naturally occurring ionizing radiation arising from sources outside the Earth’s atmosphere. The levels of cosmic radiation increase with altitude, so airline crews are exposed to enhanced levels of this radiation.

Because crewmembers are being exposed to Cosmic Radiation, it is important to evaluate the extent of exposure and track it with the AIMS Cosmic Radiation functionality allowing you to assess/inform crew, then take special precautions and additional protective measures in relation to the levels of radiation they receive.

General

- The Council of the European Union adopted Directive 96/29 Eurotom, which European Union Member States need to adhere to and implement.
- Obligations of Air operators with respect to the above Directive include the observance of:
  - Calculating and recording the amount of exposure.
  - Producing information to crewmembers regarding their exposure level
  - Crew Scheduling, where all schedules should be planned in order to minimize and reduce the amount of Cosmic Radiation that a crewmember will be exposed to during a ‘Solar year’
- Doses of Cosmic Radiation are measured in MilliSieverts (mSv) and microSieverts (miSv)
- 1000 microSv = 1 mSv
- Further assistance may be obtained from the following source: Civil Aviation Authority, Website www.caa.co.uk/srg

Functionality

- AIMS can interface with 3 different systems that calculate the amount of radiation dosage: CARI-6 from US, EPCARD from Germany and PCAir from Canada. AIMS supplies the details of the flight operated and these systems return to AIMS the amount of Cosmic Radiation dosage which is then stored in AIMS and used for warnings/statistics reporting.
- Measurements may be added to the Citypairs database both manually and via an Upload process.
- In the absence of the Citypair data, measurements may be added directly into the Voyage Report.
- Various rules may be set to monitor Cosmic Radiation, including special provisions for pregnant crew.
- Violations to the rules will be received online and may also be checked via the Crew Schedule Validation Report.
- Reporting facilities may be run for a group of crew or an individual crewmember.
Establishment Planning System

The goal of the AIMS Crew Establishment Planning System is to assist the crew planner ensure that there is steadily sufficient crew to cover the anticipated flight schedule, by highlighting the periods, the number and type of crew, and the bases where crew are required. To assist the planners even further, AIMS highlights the number and type of crew that need to be upgraded or recruited together with the dates each type of training must commence. Finally the crew are given the option through the internet to place base bids (together with AC type and position bids when applicable) which are taken into consideration when crew need to be re-assigned to a new base or when they need to be re-assigned to a new AC Type / Position.

System Highlights:

- Definition of career paths separately for Flight Deck and Cabin Crew

- Crew retirement rules separately for Flight Deck and Cabin Crew, and crew retirement projections over a period of up to 10 years

- Schedule of aircraft delivery and release dates for each aircraft type

- Crew per aircraft ratios calculated separately for each crew position and aircraft type

- In periods for which a Flight Schedule exists, AIMS will use the block hours from the flight schedule and crew productivity figures to calculate crew requirements. When no flight schedule exists, AIMS will use either the “Crew per aircraft ratio” method or an Average Aircraft Utilization based on the number of aircraft expected to be in service from which block-hours will be derived to be used in the calculations.
• Calculation of crew supply separately for each base, aircraft type, and position taking into consideration current headcount, retirements, vacation, sick leave, and other absences/ground duties, accounting also for part-timers, management staff, and instructors thus reducing the number of Full-time equivalents (FTE’s) even further.

• Calculation of demand based on the flight schedule and/or number of crew per aircraft, as well as crew productivity

• Crew supply and demand figures can be provided weekly or monthly over a period of up to 5 years in advance

• Calculation of crew upgrade and recruitment requirements over a period of up to 5 years

• Calculation of amount of crew to be trained and the start date of each transition training course based on the syllabus for each type of course

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• Crew Base bidding, AC Type and Position bidding over the internet

• Automatic identification of the names of the crew to be scheduled on each transition course based on Base, AC and Position bids, and seniority.

• Fully Integrated with Automatic Crew Training Planning, Leave Management, as well as the AIMS Crew Planning modules
Crew Access to AIMS via Cell Phones (Mobile Internet – WAP)

This functionality allows crew to access AIMS through their cell phone (Crew ID and password protected).

It provides crew with the ability to view their schedule for any number of days, including:

- Crew schedule changes are highlighted, the details of the change can be viewed and acknowledged which in turn automatically update AIMS and mark the crew as having been notified
- Provides a detailed description of each flight including estimated times
- Ability for the crew to view who they are flying with
- Memos attached to each duty by the schedulers can be viewed
- In case of training, the training details are shown
- Times may be shown in UTC, Local Station or Local Base

Additional requirements for operating this functionality include a mobile phone that is WAP enabled (the Sony-Ericsson T630, Nokia 7210, Siemens C55 and Motorola V300 are some of the mobile phones that support WAP services) and a web server (AIMS server).
Crew Access via Internet (e-Crew)

Crew Access to Personal & Flight Information

The AIMS Crew Access to Personal & Flight Information web based application adds a new dimension to the way information is provided to crewmembers. This facility allows Crew to access their schedules together with a variety of other information via the Internet.

This module is designed to reduce the need for telephone communications between the Crewing department and the Crewmembers.

The majority of information exchange requirements between the two, may now be achieved by nominating ‘Crew Log-in’ locations (with optional print capability) together with highly functional information access/activity centers, the location of which could be crew rooms, outstations, or from the comfort of the crewmember’s home.

You have changes to your schedule for which you have not yet been advised.
Crew Access to Personal & Flight Information provides ID and Password controlled access for crewmembers to:

- **Flight Information**
  Locate details of any flight on any date, along with associated aircraft routings, crew routes and crew assigned to each flight, if any.

- **Airport Information**
  A Crewmember may inquire contact details for Handling Agents, Transportation Companies and Hotels for any of the airline stations.

- **Crew Schedule Inquiries including Crew Schedule Changes**
  When a Crewmember is logging in, the system will issue a flashing warning when roster changes are found. Crewmembers may then view and confirm receipt of the changes by accessing their schedule in a detailed or a brief format.
  A hard copy of the updated crew schedule may then be printed which will substantially reduce the workload of crew control department.

- **View and/or Update Personal Details**
  In order to reduce the ‘Administrative’ workload, crewmembers may maintain their personal details on their own. This information includes address, telephone, fax, e-mail, next of kin, and marital status. ‘Update’ or ‘View only’ access may be applied by case.

- **Entry of Crew requests for Days off and Vacation**
  Requests for days off and/or vacation may be entered at any time using the Web application. Crew Planning can subsequently review and either approve or reject the requests.

- **Crew Schedule Statistics**
  Displays information for the current and the previous 12 months regarding Days Off, Sick, Training, and Standby duties. Use of a graphical display format for the entire period, provides the crewmember with a comprehensive picture of his activities.

- **Cumulative Flight / Duty Time Totals and Number of Landings**
  Rolling total calculations for 7, 14, 28, 30, 365 consecutive days for Flight/Duty times, Number of Landings and Cosmic Radiation accumulated* are displayed. In addition, year to date and monthly figures for the above information is also provided.
  * Cosmic Radiation – For applicable carriers only.

- **Expiry Date Information**
  Displays details of the previous, expiry and planned date elements of the applicable flight or ground training activities.

- **Crew Training History**
  Detailed information of all crew current and historical training activities, including course details, Instructor name, Pass/Fail information, and history of promotions/upgrades.

- **Crew Messaging System**
  Messaging system where Administrative or Operational staff may send messages to specific members or groups of crew who will receive the message the next time they log-in to Crew Access to Personal & Flight Information. Crew from their side, may also transmit messages to different departments of the company in order to be viewed and actioned if necessary by the responsible people.
  This facility is also designed for the purpose of reducing the requirement of telephone contact between Crew and Crewing department.

- **User defined external link**
  Administrators may create links for up to 4 external addresses, and the crew may access these by the simple press of a button. These addresses may be used to access any URL address such as a Weather provider, Flight Planning system etc.
Crew Access to Personal & Flight Information is a platform that is used as the access point for Crewmembers to a variety of Add-On modules, given their airline has purchased and installed them. The Add-on modules include:

- **Vacation Bidding.** Crew may apply their Leave Bids for being processed by the ‘Leave’ module
- **Crew Check-in & Check-out.**
- **Preferential Bidding System.** Allows Crew to apply their bid preferences, which will be processed by the Preferential Bidding System award method.
- **Trip Trades.** An interactive facility allowing Crew to trade published schedule duties with those of others.
- **Line Bidding.** Computerized bid selection process, which enables crewmembers to bid for lines.
- **Base/AC/Position Bidding.** Efficient means of recording preferences to operate from certain bases, on certain AC types and/or position.
- **Training Results and Assessment Forms.** This option – part of the Training module- allows Instructors to input via the Internet, the training results for each trainee, which will then automatically update the crew records.

- **Journey Log Entry.** Within this feature pilots have the ability to access and record actual flight details pertaining to the flight just completed. (e.g. Actual times, Fuel, Duty hours, Flight Report etc.)
- **Crew Briefing Report.** The Crew may print their Flight Brief by themselves from the Crewroom, the Hotel or from home.
- **Crew Allowances.** Provides a report with the Crew Allowances for the selected month.
- **MEL Report.** A report with the open MEL items for the A/C registration the Captain is assigned to operate.
Crew Bidline Selection

The AIMS Line Bidding System is a User-friendly computerized bid selection process, which enables crew members to bid via their home PCs, Internet cafes or any other Internet accessible site.

Due to the inherent nature of (pure) Line Bidding, vacation, leave, daily and weekly training assignments and any other pre-assignments are not considered in the awarding process. AIMS does, however, alert the crewmember of said events during the roster period before the crew member selects his/her lines. Normally, consideration is given to the number of lines required to fill vacancies created by leave and planned training/upgrading and a proportionate number of reserve lines are created.

Line bids are open to crewmembers based on position and seniority. Line Bidding provides for the crewmember to select as many lines as his/her seniority allows. The system will award the highest choice possible. In the event a crewmember higher in seniority amends his/her bid, the system will amend the (lower crewmembers) bid if a line(s) becomes available due to the amended bid.

Highlights of AIMS LBS

Upon entry to the system, the crewmember is able to view his/her current schedule and view Bidlines for the upcoming period.
**Bidline information includes:**

- Daily flight assignments (flight numbers). By double clicking on a single flight, further information regarding the flight is displayed, including flight dates and days of the week, routing, credit hours, block hours and duty hours.
- Estimated cumulative Credit Hours, Block Hours, Duty Hours and Off Days for the roster period.
- Print features.
- User defined cut off date/time for bidding.
- Indication of a senior crewmember having submitted a bid for the same line.
- User Supplied bidline “package information,” which the crewmember is compelled to read before he can bid.
- Indication of line awarded to crewmember via the web module upon award completion.

System functionality enables a crewmember to “edit” his/her selection, e.g. Clearing all entries or de-selecting choices during the selection (bidding) process.

Auto-assignment by the system for crewmembers who do not bid or do not have a standing bid. The User may select the methodology of auto-assignment, i.e. Simple first available crewmember into first “open” slot or lowest 30-day block total to highest block time (available) line. Crewmembers, who have been auto-assigned, will be denoted by an asterisk on the roster.

User customization of the bidding screen includes full palette color choices for STBY, OFF, scheduled flight days, etc.

The AIMS Line Bidding System recognizes limitations including:

- Lines containing restricted airports.
- Carry-in overlaps from previous schedule.
- Junior pilot assignment restrictions.
- Government rules regulating Flight and Duty.
- User-defined rule sets (labor union limitations).
Crew Access to Preferential Bidding

Overview

- Accumulation, evaluation and automatic assignment of crew preferences based on either pure seniority or rotating seniority, while ensuring full coverage of all duties.

- A large variety of crew preferences may be accepted such as, days off, early starts, late finishes, specific flights, fly-with preferences and much more.

- Standing bid (default bid) selection for crew who could not or have not placed any bids for the next bid period.

- All bidding can be done through the Internet from home or in crew rooms.

- Ability for crewmembers to weight their requests (e.g. Hand in request A and B, but prefer A over B if only one is possible).

- Prior to bidding, crewmembers have the option to view their schedule with all pre-assigned duties for the next bid period and find out for which flights they are eligible. Following the bid award, they can obtain a listing of requests that were granted, as well as those that were denied and a reason for the denial.

- Just prior to bid closing day crew may evaluate their bids, find out if there are any conflicts (such as “trip requested no longer possible due to changes in your schedule” or “likelihood of being awarded trip is very low as 2 crew of higher seniority have bid for the same trip”) and make last minute changes.
• Basic rules can be set for the number and type of requests that can be accepted (e.g. No more than 4 consecutive days off and not more than once in a month).

• History of how many times each type of request has been granted to each crewmember including the last date the request was granted.

• Statistics on crew satisfaction. i.e. Percentage of requests granted for each group of crew and for a User-defined period.

• Requested days off and flights once automatically granted by the system, bear a special indicator to warn crewing staff to avoid removal of these duties.

• Ability to obtain list of requests made by each crewmember, which can be by type of request and date.

**PBS Supported Requests for Time Off**

• **Fixed/Floating days off**
  
  \((X\) consecutive day(s) off starting on date \(Y\)) / \((X\) consecutive day(s) off starting any date in the period \(Y\) to \(Z\))

• **Repetitive days off**
  
  \((X\) consecutive day(s) off every week starting on weekday \(Y\), in the period \(A\) to \(B\))

• **Variable length days off**
  
  (Ability to request days off around a ‘primary’ day)

• **Early/Late/Night duties:**
  
  (Start between e.g. 10:00-12:00 local time / between 22:00-23:59 / determined by the administrator)

• **Short Time Off:**
  
  (Short period of time off on a given day or period)

• **Time off between trips**
  
  (Minimum \(x\) days off between 2 trips)
Flight Preferences

- Specific trips/destinations
  - Selection of a specific trip number or airport destination, to be operated as follows:
    - On specific day.
    - Once, on any day of the period selected.
    - As often as possible in the period selected.
    - Repetitively on certain days of the week and in the period selected.
    (e.g. Operate JFK layovers every Monday in the period X to Y.)

- As many overnight flights as possible

- Flights with specific A/C Type(s)

Flight Avoidance

- Avoid specific trips/destinations
  - Selection of specific trip number or airport destination to be avoided in the following periods:
    - On specific day.
    - On any day of the period selected.
    - On certain days of the week and in the period selected.

- Avoid flights with multiple night stops
  (Avoid flights with more than X nights away from base, in the period Y to Z)

- Avoid flights on certain A/C Type(s)

- Domestic flights restriction

- International flights restriction
**Miscellaneous Bids**

- **Same/not same schedule with someone else (“Buddy Bidding”)**
  
  In the period selected, allow two crewmembers to:
  
  - Fly all trips together.
  - Fly all layover trips together.
  - Fly specific trips together.
  - Have the same days off.

  Additionally, in the period selected, prevent two crewmembers from:
  
  - Flying together.
  - Having the same days off.
  - Layovers away from base on the same days.

- **Minimum time**
  
  Operate minimum block/duty/credit hours in a given period.

- **Maximum time**
  
  Operate minimum block/duty/credit hours in a given period.

- **Reserve block**
  
  Bid to get reserve blocks or avoid them.

- **Maximum productivity**
  
  Operate as many “high block hour” pairings as possible, resulting in less duty days and/or days away from base in a month, and therefore more days off.
Trip Trades

Trip Trades are considered an essential requirement by Crewmembers in the process of promoting and maintaining high Crew morale. However, Trip Trades can be one of the most disruptive and labor-intensive chores for the Crew Control area. This module streamlines the process and allows Crewmembers to generate and process their own Trip Trades. User defined parameters allow the Airline to control the access of the Crew ensuring that schedules remain legal, whilst at the same time keeping the workload for Crew Control staff within acceptable limits.

Functionality includes:

- Quick and easy access so Crewmembers can generate their own Trip Trades via the Internet from the comfort of their home, hotel or Crew-rooms.
- Ensures maintenance of legal rosters by referring to the same ‘Rule Sets’ as used by the Crew Planning and Crew Control Departments.
- Many rules and settings made available to give full control to the Company, as seen below:

  - Possible for Crew to record a wide variety of swap-requests, including trading early/late duties, days off, specific duties/trips, layovers, single day duties and vacation.
  - Option to view trades requested by other Crewmembers.
  - Crew, who don’t necessarily need to trade something, can select a button that will quickly evaluate requests from other Crew to see whom they could help if they desire.
  - Once requests are recorded, Crew have the ability to evaluate the trade possibilities.
  - Overview provided on completed ‘Trip Trades’ for Crew Planners/Crew Control to monitor traffic.
  - Logging of Trip Trade on individual Crew schedules with details of 2nd party’s ID.
• Ability to request to ‘drop’ a trip and get nothing in return, as long as Crew do not go below their ‘monthly hours guarantee’. Trip can either be donated to another specific Crewmember or can remain in ‘Open Time’.

• ‘Open Flight Bidding’ also available as a trade option. Trips that have been dropped by other Crew or have yet to be assigned by Crew Control, will appear in a listing for Crew to request to swap to operate.

• Automatic notification to Crew that trade has been completed and schedule has been amended.
Pilot Entered Journey Logs

Pilot Entered Journey Logs allow the Flight Deck crew to directly enter the Journey Log or Voyage Report data into AIMS using either Touch screens or a mouse. This allows the information to be entered by the person responsible for the report thereby reducing the need to have staff specially trained in Voyage Report terminology and functionality. The ability to streamline the Journey Logs input results in obvious savings with reduced staffing requirements.

The Module allows for the input of:

- Actual Times
- Delay Codes
- Fuel Figures
- Auto Take Offs and Landings
- Passenger figures
- Mail
- Cargo
- ZFW

The Flight Deck will see the Actual Times entered via the Movement Control screen to reference with their own times.

The Module eliminates the ‘middle person’ and reduces the possibility of Journey Logs going ‘missing’ for days on end, resulting in subsequent AIMS reports being incomplete because of missing information.

Auto Landings may also be monitored via the Expiries Database once entered with the Journey Logs.

The Module may be easily customized by the Airline to meet requirements regarding the elements listed above.

It has been designed to be consistent with a ‘User Friendly’ environment for quick and straightforward use by the Flight Deck crewmembers.
**Automated Crew Check-In/Check-Out System**

AIMS makes starting a flight duty easier for crews by providing an automated process to quickly record crew check-in times and optionally, deliver crew briefing documentation for the flight.

Access to AIMS Automated Crew Check-in System by magnetized identity cards use “swipe card” units with an associated screen and printer. These can be positioned at any User-airline designated crew check-in location. A keyboard and/or mouse and/or Touch Screens can be used as an alternative access method, if required. This module is part of the ‘Crew Web Access to AIMS’ family of modules and is normally accessible in crew rooms in any city where crew are required to report and runs on workstations connected to the internet. As soon as crew check-in or check-out they have immediate access to other personal and company flight information, assuming the rest of the Crew Web Access to AIMS modules are present.

Additionally, the system can be configured to provide automatic delivery of changes to personal crew schedules, as an integral part of the check-in process. Optionally, it can be used to record as a positive advice to crewmembers, all changes notified. Crewmembers can access the system at any time to check for changes and/or print their current personal crew schedule. At the same time, crewmembers can have any further changes automatically confirmed, as well as view messages from crewing, and an option for preventing crew from being able to check-in if their medical/License has expired.

The ‘need to contact’ workload of Crew Control staff can be effectively reduced by automatic notification and confirmation processes available when crew check-in and also if it is adopted as a mandatory post flight check-out procedure.

- **Automated Crew Check-in Using Magnetized Identity Cards and ‘Swipe Card’ Unit(s).** When crewmembers pass their ID card through the control unit, the time is recorded for Check-in in AIMS and a confirmation with flight details is automatically displayed on screen. Check-in status for flights and individual crewmembers can be monitored in AIMS by Crew Control Staff. When access by the alternative keyboard method is used, an optional password requirement to protect personal information may be applied.
- **Crew Briefing Material.** The AIMS Crew Briefing System (CBS) is a pre-requisite for the automatic creation and delivery of comprehensive Crew Briefing Reports at check-in time for the crewmember. Reports may be configured to optionally include operational, flight specific and general memos and/or defined by airport, aircraft, passenger and handling information from passenger and handling information.

- **Crew Schedule Changes.** Access using ‘Fast Card’ or a keyboard will automatically display a screen prompt announcing whether or not there are any unconfirmed changes to the crewmember’s schedule for the published roster period. Configuration options exist to enable delivery of crew schedule reports with changes highlighted by directing reports to an attached or designated printer. Also, for all changes to be marked for control purposes in AIMS as positive advice to the crewmember. Adopting this procedure removes the requirement for crew control contact to be used as an alternative option. This allows Crewing Staff to confirm these changes by the traditional contact methods.

- **Crew Dispatch Report.** Crew names and flight details for the flight crew are checking in for, including Handling Agent, Fuel Agent and Hotel information for each airport of the routing, can be reported optionally.

- **Semi-completed Journey Log.** At check-in points, pilots may obtain a Semi-completed Journey Log Form, with most of the information (Flight details, Crew Names) already included, leaving the rest of the information such as actual departure/arrival times, fuel burn, etc, to be completed manually on the form by the pilot prior to handing it in to Operations.

- **Weather / NOTAM / Flight Plans.** Depending on the Flight Planning System installed in your airline, there may be a provision for AIMS to complete the entire Crew Check-in process by including the automatic printing of Weather, NOTAM, and Flight Plan.

- **Check-out.** Since there may be more schedule changes by the time Crew return to base from their flight, AIMS allows the crew to check-out and get an optional updated copy of their Crew Schedule that includes all latest changes, thus relieving Crew Control from having to contact crew. In addition to crew schedule changes, crew may also obtain messages from crewing as well as expiry related information.

The integrated functionality of the AIMS Fast Card access method, together with the increased flexibility of the configuration options, can provide valuable opportunities to create more effective processing of information and its quick delivery to crewmembers at all times.
Crew Training Results & Assessment Forms

This module is designed to give Instructors (and/or other members of staff) the ability to complete and sign assessment forms for the Trainees at the end of a training session or course via the Internet.

System Highlights:

- Trainee assessment forms are created by the Airline using their current paper forms as a template
- Option for the Instructor to view / print prior to training, the training history and associated training forms completed by other instructors, and print a semi-completed training form to be filled out manually during training
- Electronic signatures of the Instructors can be stored in secure database
- Option to allow Directors/Managers/Trainees to counter sign the Trainee assessment forms
- Training history of Trainees is available to the Instructors
- Assessment forms may be completed by more than one Instructor
- Automatic update of Crew Training Records upon completion of the form
- Instructors, for convenience, may fill out Forms electronically using PDA’s (OPERA browser) connected to the internet
- Option for Instructor to send a copy of the assessment form to a specified e-mail address
- Optional viewing and/or updating access for Trainees and other (office) based staff
- Comprehensive Analysis and Statistics on course pass / failure trends, by instructor, course, base, fleet, position, for any period.

<table>
<thead>
<tr>
<th>Global Airways</th>
<th>PILOT PROFICIENCY CHECK RECORD</th>
<th>PILOT PROFICIENCY TRAINING RECORD</th>
<th>FE FLIGHT CHECK RECORD</th>
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<tr>
<td>TRAINER NAME</td>
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<td>CHECK AIRMAN</td>
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<td>SIMULATOR LOCATION</td>
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<td>MEL</td>
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</tr>
<tr>
<td>1 OAS/Equipment Check</td>
<td>F</td>
<td>36 Vehicle</td>
<td></td>
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<tr>
<td>2 Cockpit Flight</td>
<td>F</td>
<td>37 Cockpit Flight Check</td>
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<tr>
<td>3 Ergon. Stalls and Modifications</td>
<td>F</td>
<td>38 System Analysis</td>
<td></td>
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<tr>
<td>4 Training</td>
<td>F</td>
<td>39 Fuel Control</td>
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<tr>
<td>TAKEOFF</td>
<td>40 Air Conditioning and Pressurization</td>
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<td>5 Normal</td>
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<td>41 Electrical</td>
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</tr>
<tr>
<td>6 Instrument (AVI)</td>
<td>F</td>
<td>42 Powerpoint</td>
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</tr>
<tr>
<td>3 Observing</td>
<td>F</td>
<td>43 APU</td>
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</tr>
<tr>
<td>5 Ergon. Failure After V</td>
<td>F</td>
<td>44 Landing Gear and Brakes</td>
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<tr>
<td>8 Ground Aircraft</td>
<td>F</td>
<td>45 Cargo Fires and Smoke</td>
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<tr>
<td>9 Restricted Takeoff</td>
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</table>
Operations Control Related Add-On Modules

Automated Movement Message Handling

Interfacing the wide functionality of the AIMS Operations Control System with the information processing capabilities of the vast SITA network, an even more powerful tool to manage the daily airline operations is created. AIMS addresses the time critical elements of aircraft movement control by providing automatic upload of information from all Movement (MVT), Load (LDM) and ACARS messages delivered using SITATEX.

To provide an overall monitoring capability, AIMS can be configured so incoming messages either automatically update the AIMS flight schedule or are held in a queue for content verification and system update initiated by the Operations Controller. All incoming messages are stored for a defined period and may be viewed by Users.

Equally important is the additional functionality this provides to operations control tasks at base stations. When activated, AIMS automatically generates Movement (MVT) messages for transmission using the SITA network whenever a base departure information element is updated or changed by the duty controller.

To enable all bases within the airline route network feel closer to the Operations Control Center, airlines can expand their automatic information and notification possibilities and create a more cohesive network by making the SITATEX Interface an integrated tool of AIMS.
Activation of the AIMS-SITATEX Interface and enables AIMS Operations Control to:

**Automatically receive and process Load Messages (LDM)**

**Automatically generate and transmit SITA MVT messages** using the SITA network for flights departing from airports designated as bases within AIMS. When a controller enters an ETD, ATD, or PX figure for the flight, this initiates a movement message. The system automatically generates a formatted SITA message for transmission to the SITA addresses nominated by the User. Airport-relevant SITA addresses are stored in a database and may be selectively grouped for operations to, or using, a designated airport. Messages can be edited and may be sent to any SITA address contained in the AIMS databases.

**Automatically receive ACARS messages** containing standard OUT, OFF, ON, IN and ETA time information. The AIMS Flight Schedule is automatically updated, and thereby the Movement Control display is also automatically updated. As for MVT messages, Controllers may view all incoming ACARS message and manually amend any time fields updated by ACARS as required.

The installation of the SITA connection provides an additional communications benefit. Without reverting to a different system or AIMS menu point, Users can create and send ad-hoc messages to any address in the SITA network directly from AIMS Operations Control.

**Additional Hardware / System Software Requirements:**

*SITATEX GATEWAY PC and SITATEX for Windows Version 3.2 software from SITA are prerequisites for the AIMS SITATEX Interface.*

*You may install either the single User X28 dial up version 1, or the LAN X25 version of SITATEX for Windows.*
EUROCONTROL Message Management System (ATC Slots)

Due to the complexity of European airspace and the high amount of workload required for communication with the CFMU, AIMS has developed this ATC Slot Management System to provide the ‘User’ with the ability to maintain a reliable and time saving two-way information exchange with Eurocontrol. This system automatically processes all types of incoming CFMU messages, updates the flight display issuing alerts when action is required.

- Reception of all IFPS incoming messages. It activates a flight upon receipt of a FPL ACK message and issues a warning in the event of a FPL REJ message being received.
- Upon receipt of a CTOT, it evaluates any delay given when the acceptable limits are exceeded and a warning is issued.
- Handling of flights where no CTOT applies, but EOBT and ETD are different in excess of the acceptable time limits.
- Responds to SIP, RRP and RRN messages by producing the appropriate format for each case, without the necessity of the User to hand-type most of the times.
- Upon receipt of an FLS, FSH or DES message SMS prompts the ‘User’ to respond with the required information.
- A ‘mouse click’ is enough to generate the applicable response message – SMS is ‘User friendly.’
- Production of CNL, DLA, CHG format messages and their corresponding ACK, MAN and REJ CFMU response messages can be processed by the system.
- A comprehensive flight display provides for a ‘Controlled’ environment. Alert prompts are provided by use of color changes to the flight leg display.
- The history of a flight can be checked at any time.
- RPL’s: Alert prompts are provided whenever the RPL criteria ‘on the day’ no longer matches the stored data.
M.E.L. Tracking System

The M.E.L. tracking system enables the User to closely follow the ‘life’ of a component or structure that has been deferred or ‘continued’ by the Engineering Department. Category A, B, C and D items with different repair intervals can be tracked separately with expiry warnings issued to Maintenance and Operations Control when appropriate. Aircraft with expired M.E.L. items cannot be scheduled until Engineering clears the MEL.

A graphical Gantt chart representation of all outstanding MELs against each aircraft together with the flights assigned to that aircraft enables Maintenance Control to view aircraft availability and clear the ‘Active’ items on time.

Historical data on individual MELs or MEL categories can be viewed and/or printed. ‘Chronic,’ items can be easily identified by Engineering prior to scheduled maintenance inspections.

AIMS categorizes MELs into seven categories:

- Airframe
- Avionics
- Pressurization
- Electrical
- Brake-system
- Anti-icing
- Fuel system

User reports include:

- MELs for a selected date range/aircraft.
- MELs for a selected aircraft type.
- ‘Active’ MELs for selected date range or aircraft.
- ‘Cleared’ MELs for selected date range or aircraft.
- MELs by category.
- Average length of ‘Active’ MEL items.
- Statistics on ‘Chronic’ (repetitive) MELs on a particular aircraft.
Dispatchers/Engineers Training Records

Enables the maintenance of personal data for Dispatchers, Engineers or any other group of internal/external staff for which training records must be kept.

Various historical training records can be maintained for every single Dispatcher/Engineer, including Results (pass/fail), Instructor information and other Comments required for entry.

The type of training and validity periods are User-definable.

Amendments to certain fields are permitted, so that a new calculation can be made on the updated data i.e. altering a validity period will update the system with a new expiry date.

Report functionality highlights the Dispatcher/Engineer(s) who will expire in the selected period, together with the type of expiration. It also allows you to print the Training History of any individual or company found in the Non-crew List.
Weather & NOTAM Information Management

Automated Weather and NOTAM Tracking

This module is linked to a weather / NOTAM provider over the Internet (currently WSI – Weather Services International), and it uploads Weather and NOTAM information for every airport associated with each flight, together with the diversion alternate airports, for up to several hours from the current time.

The weather information is then decoded and evaluated based on limitations which are applicable to each Airport and the Aircraft operating each flight.

The weather element values are compared to the Aircraft / Airport limitations and they are then translated and displayed (in the form of a color coded box comprising of four triangles) on the graphical Aircraft Movement display. Each triangle represents a different element; ceiling, RVR, visibility, and runway crosswind.

The green color signifies that the corresponding weather element is below warning limits, the yellow within the limits, and the red (alert) when the weather element is above limits.

When any of the weather parameters exceed the alert limitation, in addition to the red color, a violation will be issued to alert Ops Controllers who may not have activated the Graphical Weather representation.

Ops Controllers may easily access the latest Weather and NOTAM information for an airport by simply clicking on a flight. This information may include diversion alternate airports and will also include the last three observations of Significant and the current forecast weather.

Crew Qualifications and Weather Limitations

The weather information is cross-checked with Pilot Qualifications. If the ceiling and RVR elements are above the warning limitations area, the system will evaluate each pilot’s qualification and:

- Accept the operation if the pilot has a current CATIII license,
- Issue a violation to both the Ops and Crew Controllers if the pilot’s CATIII license has expired or is not available.
Commercial Planning Related Add-On Modules

Flight Cost and Revenue Analysis

Provides a detailed breakdown of all costs associated with operating a specific flight or group of flights over a given period of time including associated revenues, facilitating calculations of flight or entire schedule profitability.

Highlights

- User-definable cost elements (Operations, fuel, maintenance, salaries, Handling & Terminal fees, ownership expenses, and many more).

- Charges set up based on Direct costs, Station related costs (Handling) and Routing related costs (Over-flight Fees).

- Fixed and variable cost separate calculations.

- Cost calculations for specific flights or group of flights over a period.

- Daily/monthly storage and maintenance of fuel rates at each airport.

- Option to report only selected cost elements for a group of flights based on both historical and scheduled operations.

- All cost elements have an effective date attached to the charge to allow for periodic changes ensuring historical and scheduled costs analysis are accurate.
- Ability to run cost/revenue calculations for flights already operated and compare with originally estimated cost/revenues.
- Cost statistics per seat hour, block hour, flight hour, passengers, ASK and RPK.
- Ability to report ACMI costs separately.

### FLIGHT COST ANALYSIS (05/06/2006 - 11/06/2006)

<table>
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<tr>
<th>Flight Number</th>
<th>Runway</th>
<th>Departure Time</th>
<th>Arrival Time</th>
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<tr>
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<td>15:30</td>
<td>20:25</td>
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<td>06/05/2006</td>
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</table>

**Route Information**

- **Flight Type**: 
- **Number of seats**: 318
- **Passenger load factor**: 84%
- **Number of paid/seat**: 258/318
- **Cabin size**: 7181.82 Gt.
- **Cabin size**: 7181.82 Gt.
- **Cargo load factor**: 7.76 MT
- **Expected/Cargo capacity**: 55 MT
- **Tare weight (block hours)**: 9.00 MT
- **Tare weight (flight hours)**: 9.00 MT
- **Total distance**: 11,320 km
- **Crew Complement**: 1x3A+1x3B+1x3C+1x3D+1x3E
- **Costs reported in**: EUR

**Cost Statistics**

- **Total cost per seat hour**: 16.55 EUR
- **Total cost per passenger**: 22.44 EUR
- **Total cost per flight leg**: 35.825 EUR
- **Total cost per block hour**: 7.74 EUR
- **Total cost per flight hour**: 8.695 EUR
- **Total cost per elapsed hour**: 6.290 EUR
- **Total cost per ASK**: 0.0560 EUR
- **Total cost per RPM**: 0.0663 EUR
- **Total cost per PCR**: 5.0960 EUR
- **Profit/Loss per ASK**: 0.0061 EUR
- **Profit/Loss per RPM**: 0.0094 EUR

**Revenue Information**

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<tr>
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<tr>
<td><strong>Passenger revenue</strong></td>
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<tr>
<td><strong>Business passengers</strong></td>
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<tr>
<td><strong>First Class passengers</strong></td>
<td>5,496 EUR</td>
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<tr>
<td><strong>Total passengers</strong></td>
<td>50,995 EUR</td>
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<tr>
<td><strong>Total revenue</strong></td>
<td>51,495 EUR</td>
</tr>
</tbody>
</table>

**Profit/Loss Summary**

<table>
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<th>Profit/Loss Calculation</th>
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<tr>
<td><strong>Total revenue</strong></td>
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<tr>
<td><strong>Total cost</strong></td>
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<td><strong>Profit/Loss</strong></td>
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<tr>
<td><strong>Break-even load factor</strong></td>
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</tr>
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</table>

- Revenue calculations based on passengers, freight, mail and in-flight sales.
- Profit/loss calculations including break even load factor.
- Cost/Revenue/Profit-Loss projections over a period of years based on annual fluctuations of various cost elements, demand and fares.
- All costs including airport charges may be supplied in each country’s local currency.
- Cost/revenue figures may be reported in any currency.
- Daily/monthly storage and maintenance of exchange rates for each currency.
- Fully integrated with AIMS Crew/Aircraft scheduling and Operations Control.
The AIMS Slot Management System is designed to assist ‘Schedules Planning’ personnel manage the airline’s slots, before and after the IATA Slot Conference. The functions provided by the system are as follows:

- Compliant with IATA Chapter 6.
- Calculates historical slots for the slot-coordinated airports based upon the previous equivalent season.
- Evaluates slots held (previous season) against the next adjacent season in order to retain the same flight schedule.
- Automatically generates and transmits required messages for SCR and SMA airports via SITA. (Users are given the option to view and change the messages prior to transmission.)
- Following the processing of any flight schedule changes, the system generates and transmits revised SCR/SMA messages.
- Automatically receives and processes SCR / SMA responses from the Airport Slot Coordinators.
- SIR’s can be received and processed in order to synchronize the requirements of the Airline with the Airport Slot Coordinators.
- Incorrectly formatted messages can be grouped, viewed, edited and automatically processed by the operator.
- Produces a report relating to: ‘Unused’ and Off-slot’ operations, together with details of slots for which no confirmation has been received.
- User-defined message format (departure/arrival/turnaround) configuration to support special regional and single station exceptions.
- Advanced message filtering allowing simultaneous processing of numerous messages belonging to different groups.
- Evaluation of incoming messages format and automatic correction of invalid ones.
- Advanced editing and customization screens ensure a “User-friendly” work environment.
- Support of message from Coordinators that have format variances to the IATA standard.
- Graphical version of Airport Slot Management.

- Ability to fully maintain the Day-to-Day slot requirements through the graphical display.
- Alerts the operator on the Graphical Flight Schedule display when the consequence of a flight delay will be the loss of the historical slot.
Add-On Modules Linked to All AIMS Applications

Automated E-Mail / Fax Communication

The AIMS automated E-mail / Fax Communication Facility provides an increased and more flexible range of transmission options for forwarding any available AIMS reports directly, to any User-nominated e-mail address or fax number.

Available Options for Automated E-mail and Fax Transmission:

- Send personal crew schedules directly to the e-mail or fax address of each crewmember.
- Send crew hotel accommodation reports directly to the e-mail or fax address of each hotel.
- Send General Declaration reports directly to the e-mail or fax address of each Handling Agent.
- Send any User selected and configured AIMS report directly to any e-mail/fax address of the User’s choice.
Automated E-mail and Fax Transmission Options

Send Personal Crew Schedules

From the AIMS Reports Menu and by using speed button access, automated transmission options are available for sending a personal crew schedule using e-mail or fax to any crewmember with a listed e-mail address and/or fax number. A similar option exists for e-mailing/faxing crew HOTAC reports to hotels. Recently included in this ever expanding module is the option to e-mail or fax General Declarations directly to the appropriate Handling Agent. Alternatively, provision is made for the entry of a non-listed address in addition to the “send to printer” option.

Standard AIMS crew selection criteria and information parameters are used to provide the schedule format for transmission. “Individual” or “multiple send” options may be selected or combined for simultaneous processing. This enables automated publication and distribution of a single schedule or individually to a crew group.

Send Any Report to Any Address

For Conferences, Out of Base Meetings, Operations Meetings, Base to Base, Office to Office or whenever there is a report required from AIMS, the latest information, data, or statistics, can be reported and transmitted directly to a listed E-mail or fax address, or alternatively to any requested address.

Using e-mail, multi addressing is possible and enables (for example) the flight schedule of the week to be transmitted simultaneously to LGW, MAN, DUB and CDG. Delay analysis statistics and an accompanying text message can be sent to all stations for action and response, as required.

Hardware/System software requirements include:

- MS Exchange Server and MS Outlook for the e-mail option.
- ALCOM LanFax 6.0 for NT (www.alcom.com) or CAI Faxserve for NT (www.cai.com, for the Fax option.)
Message Distribution System

Use of the AIMS Message Distribution System provides the opportunity to 'fast track' the processing and delivery of new or revised flight schedule information from the Commercial and Operational Control department(s).

The Message Distribution System (MDS) module of AIMS can be configured to automatically generate and transmit messages to the applicable department, individual AIMS User or external agencies: Handling, Fuel Agents, Tour-Operators, etc. via e-mail, fax or SITA communication links.

Schedule Change and Notification (Auto Alert) functionality, ensures the efficient delivery of any applicable 'event' message relating to specific changes against the flight schedule. Priority alarm settings such as “must know at earliest,” “should know” or “information only” can be made.

AIMS Message Distribution System will generate and automatically transmit a Schedule Change Alert and Notification (Auto Alert) message when:

- A new flight is introduced.
- A flight is cancelled.
- A flight is re-scheduled, re-routed or diverted.
- A flight is delayed by more than a specified limit.
- An aircraft type changes.
- The tail number or registration number changes.
- An aircraft with different seating capacity is assigned to a flight.
- A flight schedule change breaks the crew route structure.
A flight delay causes scheduling rules violations.
A flight delay causes crew duty conflicts.
A crew route addition or change requires hotel rebooking.
A crew route addition or change requires crew transport re-arrangements.

Having configured the appropriate ‘event’ and ‘alert state’ messages, the lines of communication between the inter-departmental and external agencies will effectively become synchronized. Subsequent handling and communication of disruption(s) to the flight schedule will be far more efficient, their associated costs to the company being contained by the ‘Information flow.’
AIMS Report Generator

Due to the ongoing dynamic evolution of the AIMS generic report requirements, and to accommodate the specific requirements of individual client airlines, it is possible to expand report selection, content and functionality with a quantum leap forward in data access, processing and delivery.

A generic AIMS report delivers a range of data reflecting the selection options. In some cases, it delivers an excess of information; in other cases, it is not able to provide all the information or the sorting requirements in full. This situation is avoided by using the Report Generator interface.

The Crystal Reports reporting tool is available for use with the current release of AIMS, in order to provide AIMS Users with an alternative way of retrieving information from AIMS data files, format them in a User-defined way and print them. For this purpose a small interface program called Report Generator Interface was created, and its purpose is to link the actual Crystal Reports application to AIMS. This has all the necessary functionality required for designing and printing a report containing data from the comprehensive AIMS databases. This improved capability is however, directed more towards effective use by experienced and trained IT personnel to support everyday AIMS Users.
The AIMS Report Generator utilizing Crystal Reports provides added functionality to access, process, format and deliver AIMS data as:

**Public Reports** - Available for viewing and use by all AIMS Users.

**User Reports** - Accessible only to AIMS Users for whom the report is created.

Individual Reports can be created using data from AIMS Data Definition Files (DDF’s) or ODBC drivers and can be further individualized by choosing to only include specific data fields in a User-defined format. The result is a report of which is totally specific and exclusive to the User airline that produces it.

The use of the Crystal Reports Engine is not mandatory. Other report engines can be used to access the AIMS data such as MS Access, through an ODBC driver and as a result, the AIMS Report Generator Interface software may not be used. Although there is little software accompanying this add-on module, what is important and what comes with this module is a detailed table structure (Table View) for each of the important AIMS databases that need to be accessed, Entity Relationship diagrams that describe the links and the relationships between databases, and very detailed documentation with a multitude of examples on where to find data and how to extract it.

*Additional Hardware / System Software Requirements (optional):*
*Crystal Reports (latest version) from Crystal Decisions, together with training and support from Crystal Decisions or an authorized Training Center.*
### SMS Messaging

Allows the transmission of SMS messages to cell phones in one or more of the following cases:

Crew schedule changes trigger an SMS message for the crew to take action and find the details of the change in one of the following methods:

- By selecting the link displayed at the end of the SMS message, which takes the crew directly to the AIMS Mobile Internet application (if installed) on the day(s) where the schedule was changed. From this point, crew can acknowledge the change and update AIMS automatically.
- By visiting e-Crew or IVR to get the schedule changes.
- By contacting Crew Control.

Delayed flights over a certain amount of time again trigger an SMS message for the crew, which acts as a notification message and handled the way described above.

When the Message Distribution System (MDS) module is in place, messages generated due to flight schedule changes can be transmitted as an SMS message, in addition to email/fax/SITA to any airline staff or airline reps.

A User-entered SMS text may be sent to any group of crew using different selection criteria and filters such as SMS only to the crew who are assigned a particular duty in a particular period.

*A reliable Internet connection is required and subscription to Clickatel, SMS Web services.*
CTI Phone Dialer

Automated Dialing of Crew numbers

The AIMS Dial Pad is an integrated dialing tool that allows speed dialing of listed Crewmember telephone numbers from different areas and applications within AIMS.

It relieves Crew Control Staff from having to look for phone numbers, and dialing the number, by allowing them to call any Crewmember with just a click.

This automated phone dialing facility features:

Manual Dialing
Automatic Dialing when Smart Dial has been activated
Dial Pad access via the Crew Notification List screen for more than one crewmember
Memo functionality exists to create and display crew memos from the dial pad memo icon
Fast crew contact in the check in process, which allows the identification of missing or late crew to be quickly resolved

The CTI Phone Dialer is integrated with Intel's CTI NetMerge, which supports the most popular PBX's (AVAYA, SIEMENS, ERICSSON, ALCATEL etc) and operates on Windows NT, Windows 2000 and Windows XP platforms.
Using the Dial pad and Smart Dial
The AIMS dial pad is accessible from Crew Schedule, Crew Icon and from Crew on Route and Crew on Leg displays. The dial pad has a keypad/control area and a speed dial area displaying numbers for crew and next of kin. The Smart Dial option, when set, enables the immediate and automatic dialing of any selected crewmember who has only one number listed. The speed dial area offers an automatic dial function by clicking on any number displayed. Manual entry of numbers is followed by a simple click to dial.

Contact Availability and Memo Reference
A 24-hour status bar display highlights scheduled duty periods of the selected crewmember, has a moving actual time indicator that aids the fast assessment of crew rest periods and gives a clear indication of appropriate contact opportunities.

The crewmember dedicated memo function enables the recording of alternative contact numbers and crew-requested nominated contact priorities, or points of contact, together with any User-initiated specific information and requirements.

User Workstations
The continuing development of AIMS is increasing the opportunities to improve operational efficiency for Users with high-level workloads. The use of the AIMS on-screen dial pad for all outgoing calls creates the necessity for increased use of headsets for all communications and promotes more efficient work areas with lower noise levels.