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AERO Weight & Balance Module Product Overview

About AERO IT Alliance

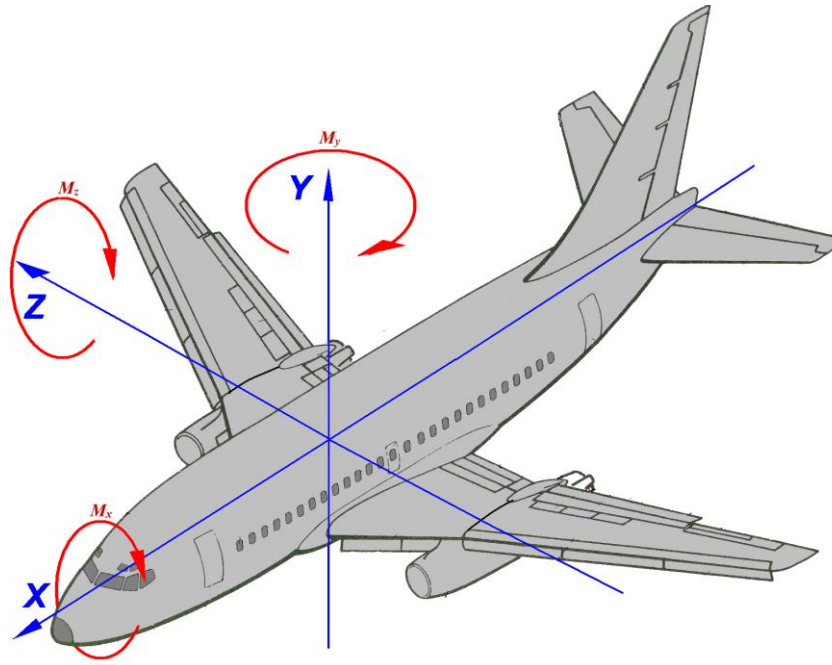


AERO IT Alliance was founded in 2018 by three companies specializing in Aviation IT (IPG, Zamar and KV Consulting) with more than 40 years of experience combined to provide full range of Advanced IT Solutions and Services for Aviation Customers Globally. Alliance HQ is located in Zurich, Switzerland.

Being an open and highly flexible unity, we believe that **our mission is to deliver Affordable and Easily Applicable Innovative Aviation IT Solutions to wider audience in Developing and Developed countries.** Especially medium and small customers can benefit from our solution.

We are highly excited by the new capabilities of the modern era, which allows us to address Customers' issues and challenges differently in a very agile and highly efficient way, not relying on costly legacy solution and practices still forced on Airports/Airlines worldwide by industry monopolies.

More information is available at <http://www.aeroitalliance.org>



AERO Weight and Balance Module

W&B Module creation drivers



- More than 40 million flights are performed annually
- Overall number of transported passengers has exceeded 4 Bln per year
- Cargo volumes are growing
- Aviation Fuel prices are high and airlines are concerned
- Qualified staff is an issue in a lot of places worldwide
- Minimize “human factor” errors

It became obvious that a solution able to perform Weight & Balance computations fast and in an optimal way is in demand to provide highest level of Passengers Safety and achieve Fuel Economy.

W&B Module Applicability areas



- Perform Commercial Load Computation
- Aircraft Balancing according to AHM560 from business jets to Airbus A-380
- Overall number of transported passengers has exceeded 4 Bln per year
- Capability to perform Remote Aircraft Balancing

Maximizing Airline and Airport Revenue is an ultimate goal while maintaining necessary Safety and Operation Control levels.

AERO W&B Module has full data model inside for each aircraft (Reg. Number) according to AHM560 assuming full history of data versions is maintained.

Inside one version different configurations for each aircraft with specific tail number may exist:

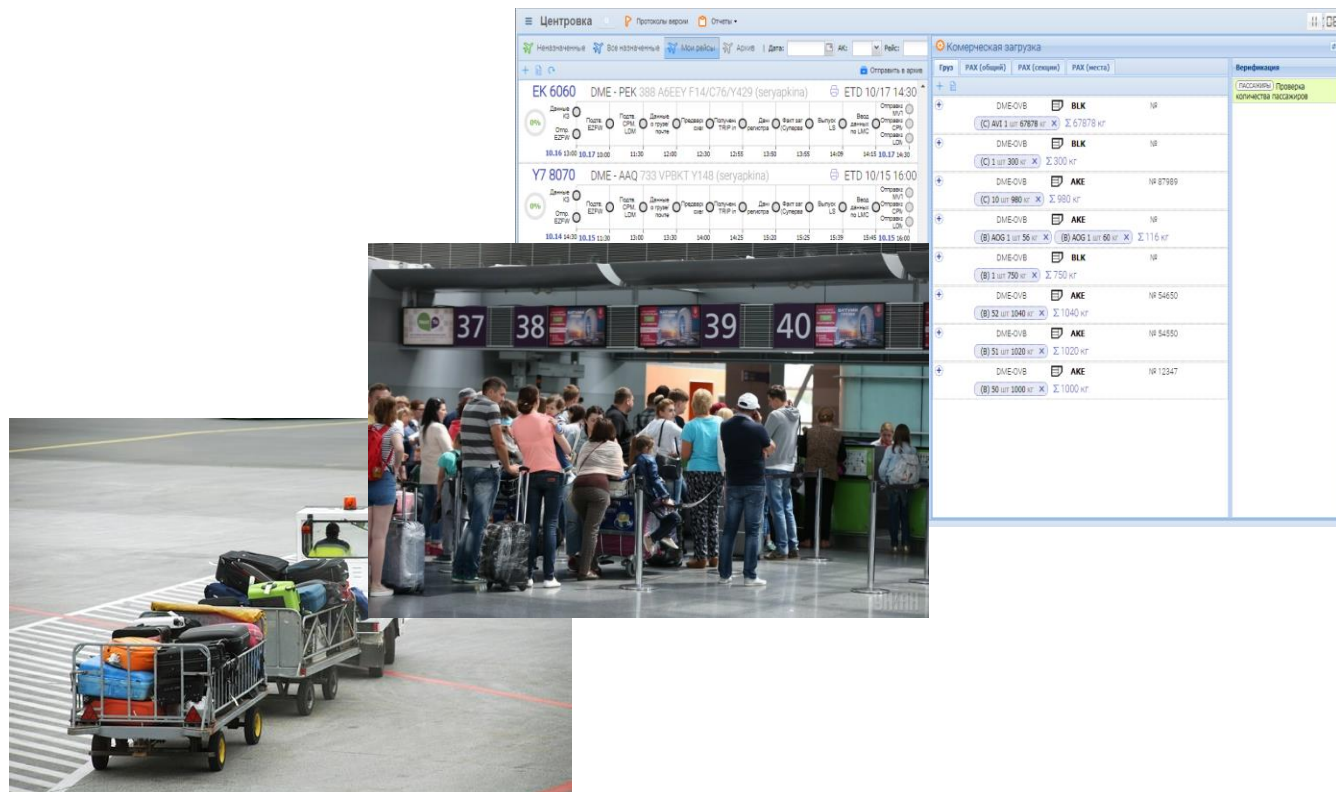
- Several passenger cabin/seats configurations
- Time limitations for Cargo Holds and Sections
- Different scenarios of extra fuel tanks configurations

The screenshot displays the AHM 560 software interface. On the left, a sidebar contains fields for aircraft identification: 'Версия АИИТ', 'Активен с: 01.10.18', 'Сформирован: 01.10.18', 'Ответственный: Сергеева', 'Причина: Тест', 'Номер версии: 14', 'Базовый номер: ТСЛНА', 'Тип ВС: 739', 'Авиационная: ТК', 'Единица измерения: ИМПЕРСКАЯ', and 'Действует с: 05.08.18'. The main area is divided into several tabs: 'Временные ограничения', 'Правила', 'Вес и константы', 'Стабилизатор', 'Топливо', 'Экипаж', 'CG Limits', 'Пассажиры', 'Кухня и кладовая', 'Грузы', 'Контейнеры', and 'Грузы'. The 'Пассажиры' tab is active, showing a table of passenger configurations. The table has columns for 'Секция', 'Ряд', 'Код', 'Класс', 'Первый ряд', 'Последний ряд', 'Кол-во кресел', 'Получено', and 'Индекс'. The data rows show configurations for sections 0A, 0B, and 0C, with rows 1 through 10. The 'Индекс' column contains values like -0.01451100, -0.0222700, -0.0107500, -0.0092400, -0.0074700, -0.0065200, -0.0055800, -0.0046400, -0.0036900, and -0.0027500.

Секция	Ряд	Код	Класс	Первый ряд	Последний ряд	Кол-во кресел	Получено	Индекс
0A	1	0A	C	1,00	4,00	24,00	-404,8000000	-0,01451100
0A	2	0B	Y	5,00	12,00	48,00	-143,2000000	-0,01075000
0A	3	0C	Y	13,00	20,00	48,00	-136,7000000	-0,00924000
0A	4	0D	Y	21,00	27,00	36,00	-383,6000000	-0,00747000

AERO W&B Advantages. Integration **AERO IT** ALLIANCE

AERO W&B Module is merging together tasks of different departments (groups): from Commercial Load planning to Aircraft Balancing and creation of Documentations and Reports.

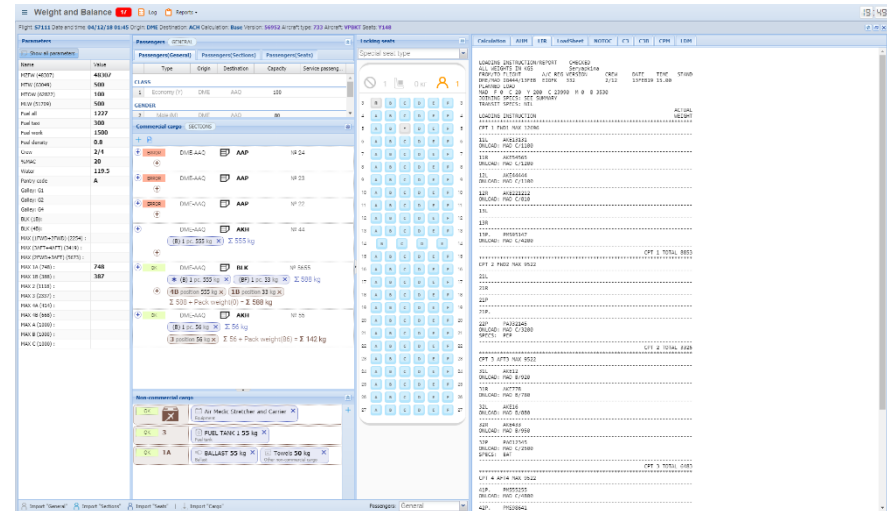


AERO W&B Advantages. Messaging **AEROIT** ALLIANCE

AERO W&B Module has full integrated Messaging subsystem supporting special types of messages (Telegrams).

AERO W&B Messaging subsystem is capable of :

- Generation of outbound messages (telegrams) regarding Commercial load and Aircraft Balancing
- Automatic processing of Inbound messages (telegrams) regarding Transit flights



Исходные данные

Пассажиры

Общий по классу

Финализированы

Пассажиры (общий)

Пассажиры (секция)

Пасс +

Тип

Откуда

Куда

Ко.

Ст.

Класс

1 Бизнес (C)

DME

OVB

5

2 Эконом (Y)

DME

OVB

160

Пол

3 Мужские (M)

DME

OVB

100

4 Женские (F)

DME

OVB

60

5 Прочие (O)

PM

OVB

0

Коммерческий груз

По секциям

Финализированы

OK

DME-OVB

AKE

№ 12347

(8) 50 шт 1000 кг

Σ 1000 кг

OK

DME-OVB

AKE

№ 54550

(8) 51 шт 1020 кг

Σ 1020 кг

OK

DME-OVB

AKE

№ 54550

(8) 52 шт 1040 кг

Σ 1040 кг

OK

DME-OVB

BLK

№

(8) 1 шт 750 кг

Σ 750 кг

OK

DME-OVB

BLK

№

(8) 1 шт 750 кг

Σ 750 кг

Результат

Пассажиры

Финализированы

Вывести все параметры

Имя

Значение

Имя

ВН (индекс)

Летний полет (sec)

Летний полет (инд.)

Кабинный полет (инд.)

Кабинный полет (инд.)

Вс багажа экипажа (...)

Вс багажа экипажа (...)

Руковод. клда экипаж...

Руковод. клда экипаж...

Топливо всего

Топливо рулевого

Топливо полет

Плотность топлива

Смена экипажа

Исходный MAC

Клд экипажа BLK (33):

Клд экипажа BLK (11):

Клд экипажа BLK (44):

Загрузка воды

Тип топлива

Доп. вес экипажа GS

Доп. вес экипажа GL

MAX (APTA+APT+Bulk) (4...

MAX Секция 11 (1013 кг):

MAX Секция 21 (1189 кг):

MAX Секция 21 (1189 кг):

MAX Секция 21 (1189 кг):

MAX Секция 21 (1050 кг):

MAX Секция 31 (0 кг):

MAX Секция 32 (0 кг):

Имя

Знач.

BW

0

170

-3.07

650

4.33

200

200

30

49526

47.68

2000

S

26474

5666

7.79

12650

4.82

</

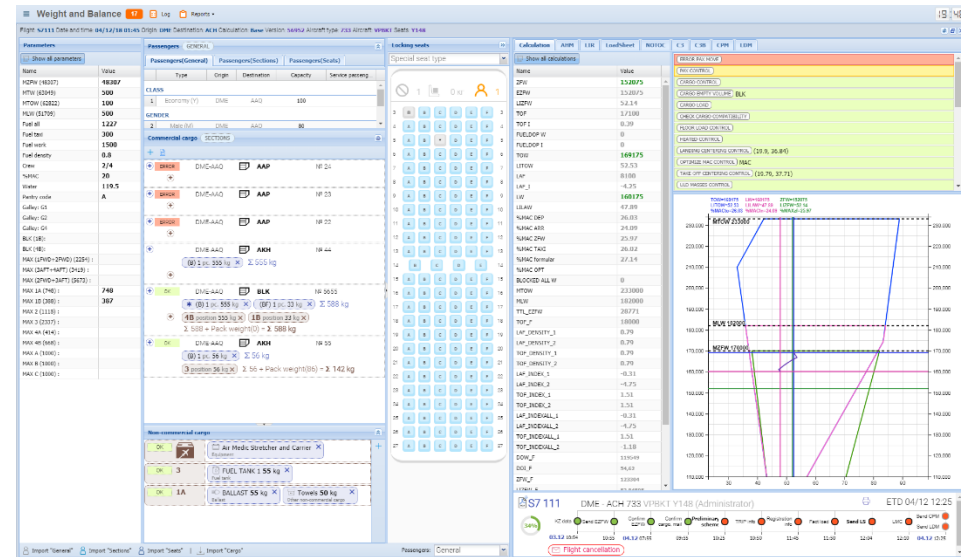
AERO W&B Advantages.Turnaround

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Service Level Agreements for Ground Handling Operations are highly relying on ability to match exact sequences and dependencies of performed Aircraft Servicing and Maintenance operations.

AERO W&B Module has precise information about Aircraft Turnaround progress thanks to integration with RMS component.

This is helping to identify “bottlenecks” in Turnaround process and take necessary actions.

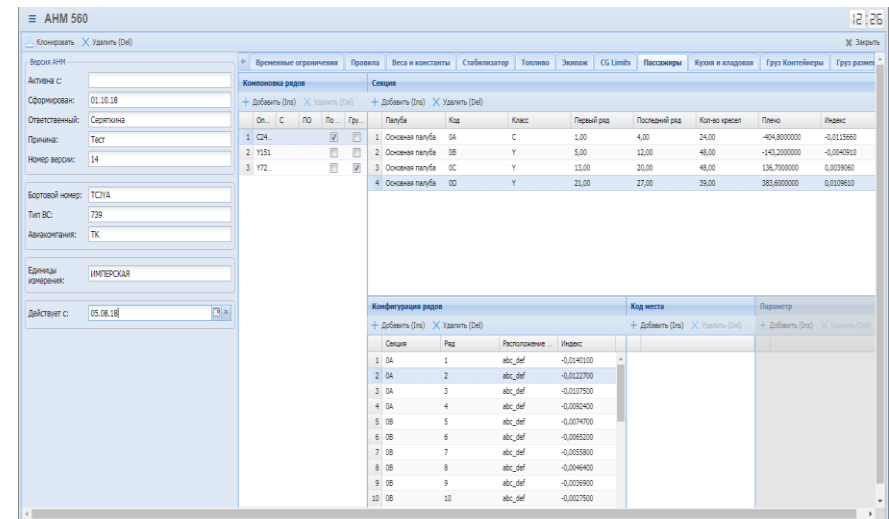


AERO W&B Advantages.Logging

W&B Module has extensive user action logging capability for all data changes in Balancing and AHM560 Modules.

AERO W&B Module is logging the following actions:

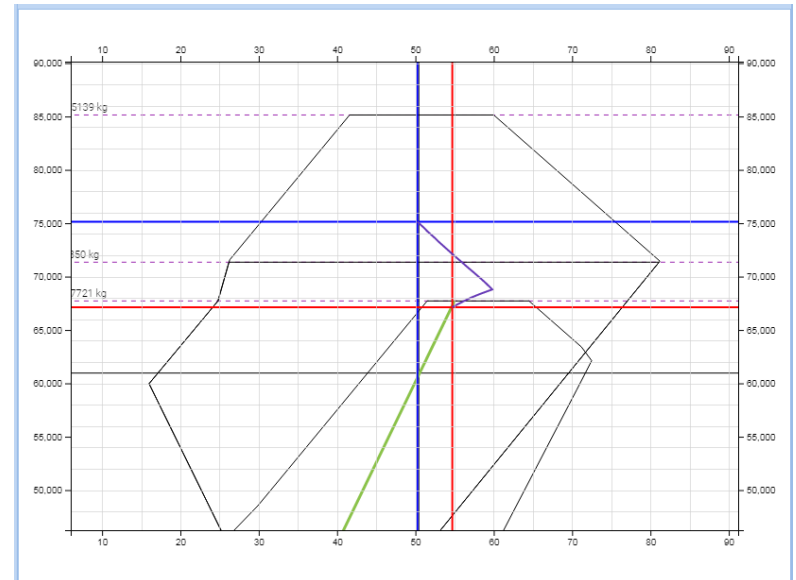
- Type of action performed (creation, editing, deletion)
- Parameter changed
- Time of change
- Source of change (User, Integration, System)



AERO W&B Advantages.Automation

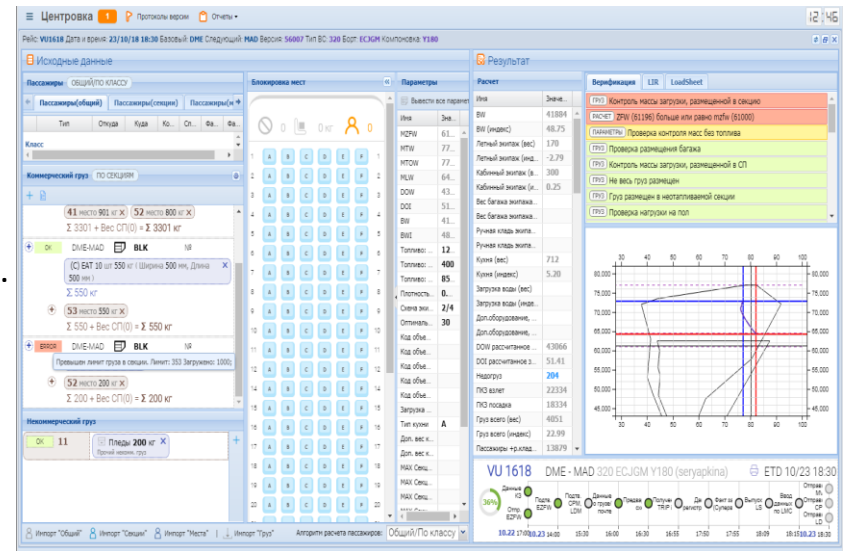


AERO W&B Module has extensive decision support capability and is automatically suggesting commercial Cargo load placement with maximum possible proximity to target values.



AERO W&B Advantages. Verification **AEROIT** ALLIANCE

In order to eliminate possibility of a “human error”,
AERO W&B Module has a built-in Intelligent verification control
taking in account multiple factors during W&B computation
and is displaying Intelligent Control results in Verification section.



AERO W&B. Summary



We believe that AERO Weight & Balance Module is among the most advanced W&B solutions available on the market today, providing high speed and precision of W&B operations for all aircraft types enhanced by extensive Messaging capabilities and Advanced Decision Making support.

AERO IT Alliance is ready to deliver customized W&B webinar on demand and discuss Pilot Trial options.



- AERO W&B Version 2 will provide Automatic Commercial load positioning within Aircraft taking into account all limitations (Roadmap 2019)
- Subsystem to create AHM565 for new aircraft types (Roadmap 2019)
- Mobile W&B Application (Roadmap 2020)
- 3D display of Cargo Hold Areas and Loading diagrams (Roadmap 2020)
- Integration with World-leading DCS through Web-services (Roadmap 2020-2021)
- Integration with external systems (AODB, Cargo Systems and e.t.c.) based on International IATA XML format (Roadmap 2020-2021)

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Contact Us:

<http://www.aeroitalliance.org>



Alliance HQ

Eastern European Office

Central Asia Office

Switzerland, Zurich, CH-8049
+41 43 311 40-09

Russia, Moscow
Skolkovo Innovations Center
Bolshoi Blv..42, Bld .1, .4th flor,
Office 1448
+7 495 728-9640

Tajikistan, Dushanbe, 734024
Dustii Halqho str. 23
+99 237 2262424