



# Aiming High

Summer 2006

Issue 1

## MILERIDGE @ MADRID

Mileridge is using the Global AIS Congress 2006 in Madrid to launch our new company newsletter.

We will be publishing a quarterly newsletter and making it available through both our website and in printed copy. Our aim is to provide details of the work which we are performing and the capabilities that we have available.

So why are we attending the Congress? For too long the AIS world has been neglected, often treated as a non-essential domain despite the necessity of its function. Given the pace of technological change and the increas-

ing reliance on information, seen not only within the Air Traffic Management (ATM) sector but throughout the world as a whole, this lack of



awareness is surprising.

With this Congress in Madrid, the worldwide AIS community has an opportunity to demonstrate that not only does it have a role within the ATM world, but that it will play an essential part. The

advent of new technologies such as the Aeronautical Information Exchange Model (AIXM) and Electronic AIP (eAIP) will increase the ability of AIS to meet customer expectations and move from an AIS to an Aeronautical Information Management (AIM) philosophy.

By exhibiting, we see the Congress as an opportunity to meet and discuss with existing and potential clients from around the globe.

If you are attending the Congress, we hope you enjoy it. If you are not attending, maybe we will meet you elsewhere.

*The Mileridge Team.*

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## SES – A WATERSHED FOR ANSPs AND NSAs ALIKE?

The introduction of the Single European Sky (SES) sees challenges for many, not least the National Supervisory Authorities (NSAs) and Air Navigation Service Providers (ANSPs) who must oversee and provide the service respectively. The requirement for certification of ANSPs brings the need for new competencies for all involved, for example, the skills necessary to conduct and record audits which are new to many.

Whilst compliance with ICAO has always been key, it is only with the advent of the SES's Common Requirements, against which providers must be certified, that emphasis is being placed on audits against defined criteria.

As we head towards a world of privatised ANSPs, certified by their NSA, liability be-

comes an ever more complex task. For example, if an NSA certifies an organisation as compliant with the Common Requirements, who takes liability if the processes are later found to be deficient?

There is little doubt that the certification of service provid-

ers is long overdue and the European Commission must be commended for the action it is taking. The growth in the aviation industry has been significant over the past few decades and looks set to continue. As the skies become busier, it is essential that those who control them are properly equipped to

perform their task.

Mileridge has been working with EUROCONTROL's Regulatory Unit to establish implementing rules, in particular relating to Data Integrity, that aim to ensure the skies remain safe for years to come.

## CHAIN – INTEGRITY COUNTS AND MILERIDGE SUPPORTS

The need for high quality aeronautical information is becoming ever greater, especially with the introduction of navigation techniques such as Area Navigation. The reliance on ground-based infrastructure, which can compensate for some errors in the data available within the cockpit, is reducing as navigation using satellite technology, such as GPS, increases.

This progress in navigation technology is faced with the reality that the aeronautical information in use does not meet the requirements laid down within the ICAO SARPs. It, therefore, does not meet the quality levels necessary to support the safety cases conducted when approving the new navigation techniques.

EUROCONTROL's Controlled

& Harmonised Aeronautical Information Network (CHAIN) activity has been established to assist States in improving the integrity of their aeronautical information and Mileridge has been heavily involved right from the start.

The primary failing in today's data provision is the mainly manual processes in place throughout the data chain,

*(Continued on page 4)*

## INTRODUCING MILERIDGE



The beauty of the aviation world hides the hard work that takes place behind the scenes.

Although the faces at Mileridge may be well known, having been in the industry for many years, the company may not. We are, therefore, taking this opportunity to introduce ourselves to you.

Mileridge was formed in 2005 as an independent consultancy company, specialising in the management of aeronautical information in its broadest aviation context. We have a core staff with

many years experience, supplemented by a network of technical experts.

Our mission is to provide a high quality service to our clients in a cost-effective way. We strive to do this by working with our clients in an open and honest manner.

By maintaining our independence, clients can be assured that the work we undertake is not influenced by relation-

ships or associations with equipment manufacturers or service providers, for example.

The following sections present some of the skills that we have available and the work that we have undertaken. Should you require any further information regarding any of the topics, please do not hesitate to contact us.

[info@mileridge.com](mailto:info@mileridge.com)

## AIS AND AIM

A significant change is underway as the traditional AIS, with its paper-based processes, moves towards Aeronautical Information Management (AIM). The primary goal is the overall quality and management of aeronautical data using automated processes and its provision in an increasingly electronic form.

The vision is for System-Wide Information Management (SWIM), namely widely available aeronautical data which uses open and interoperable standards whilst having high integrity, as emerging and future navigation techniques demand. This interoperability will help to satisfy the requirements of all aeronautical users.

Mileridge has a thorough knowledge of the current ICAO Standards and Recommended Practices (SARPs) related to AIS, as well as the ICAO supporting guidance documents and Single European Sky (SES) requirements. We are also able to offer independent advice on the management of data and how to apply the ICAO SARPs.

We have worked closely with EUROCONTROL, including supporting the Controlled & Harmonised Aeronautical Information Network (CHAIN) activity, to assist with the specification of requirements, standards and guidance for AIM. This allows us to have great visibility of the direction in which AIM will move in the future.

Additionally, it is probable that the Aeronautical Information Conceptual Model (AICM) and the Aeronautical Information Exchange Model (AIXM) will be adopted as global standards for the digital exchange of data. Our resources have been involved in the specification of AICM/AIXM and have supported AIXM-related activities, such as the extensive Computer Based Training.

The European AIS Database (EAD) also plays an important role in Europe today. Our resources have been involved in the development and facilitation of the EAD and are able to offer valuable assistance to those that have not yet migrated to the EAD.

*"It is probable that the Aeronautical Information Conceptual Model (AICM) and the Aeronautical Information exchange Model (AIXM) will be adopted as global standards"*

## FREQUENCY AND SPECTRUM MANAGEMENT



The VHF communications band faces saturation by 2015.

The combination of a number of factors, including growth in the aviation industry, advances in radio communications technology and the need for enhanced security measures in civil aviation, are leading to increased demand on the aeronautical spectrum and the management of frequencies therein. Mileridge can offer expert consultancy services in the disciplines of frequency and spectrum management.

Although aeronautical services are recognised internationally as prime users of

spectrum, there are no automatic rights of retention. Therefore, the industry must work to justify both its current allocation of spectrum and the spectrum required to support future services. Mileridge is working with EUROCONTROL to provide support to this critical task in preparation for the 2007 World Radiocommunication Conference.

Within the frequency management domain, Mileridge has experience of working with regulators and service providers, and has expert

knowledge of the new Spectrum and Frequency Information Resource (SAFIRE) system. SAFIRE is a web-based system that contains information about European aeronautical frequency assignments, and will provide State frequency managers with the ability to perform international coordination of new assignments.

For further information on frequency and spectrum management services, please contact us:

[frequency@mileridge.com](mailto:frequency@mileridge.com)

## REQUIREMENTS MANAGEMENT

Key to the success of any project is having a clear understanding of the needs at the beginning and being able to prove compliance with those needs upon completion. These needs may be met through the application of sound requirements management.

As simple as this may sound, many organisations fail to adequately control requirements during their projects. Such a lack of control can lead, for example, to requirements creep, conflict between those specifying the needs and those who are expected to meet them and, ultimately, increased costs.

Mileridge has extensive experience in providing requirements management support to customers. This can be in the form of requirements capture, analysis or tracking. Our experience is not limited to development projects but also to the specification of regulation, guidance and best practise.



Sound requirements management is an essential component of any technological change.

***“States shall ensure that electronic terrain and obstacle data related to their entire territory are made available”***

ICAO Annex 15 – Aeronautical Information Services

## TERRAIN AND OBSTACLES

Amendment 33 to ICAO Annex 15 introduced the requirement for States to “ensure that electronic terrain and obstacle data related to their entire territory are made available”.

This new requirement potentially brings about a new skill set for AIS as, for the first time, it is required to provide aeronautical information digitally (excluding the use of AFTN).

The amendment raises many issues regarding the required provision, some technical and many institutional, including the ever-present issues of liability and copyright.

The provision of this information will be a costly exercise for the aviation community worldwide and it is essential that cost-savings are made wherever possible.

Mileridge is working with EUROCONTROL to establish guidance material for the application of this amendment, such that the States may make this information available in an interoperable manner.

This task should identify potential solutions to the issues found. Furthermore, it is hoped that a cost-effective approach may be found to the provision of terrain and obstacle data.

## TRAINING

Investment in staff through training for the jobs they perform brings benefit to the organisation as a whole and Mileridge is here to help.

Through our network of experts, we are able to provide training in many domains and disciplines and for specific tools, such as EUROCONTROL’s Data Quality Tool Set (DQTS) and Spectrum and

Frequency Information Resource (SAFIRE), as well as specifications, such as the eAIP. Many of the trainers are currently employed as experts within ANSPs and, as such, bring their day-to-day experiences to the courses.

Our principle is simple: we provide our training for small classes and the courses are prepared to suit your needs.

We do not believe in a “one size fits all” approach.

Courses can be run in a location you choose, either at your premises or at our facilities, whichever offers you the most cost-effective solution.

Contact us to see what we can propose for your organisation’s needs:  
[training@mileridge.com](mailto:training@mileridge.com)



**EUROCONTROL’s DQTS**  
Just one of the products for which training is available.

***“The need to digitally exchange information is becoming more desirable, as is regulation demanding that systems are interoperable.”***

## DATA MODELLING

The need to digitally exchange information is becoming more desirable, as is regulation demanding that systems are interoperable. These two factors combined necessitate that standards are developed to allow for the exchange of information in a computer literate form.

EUROCONTROL has led the way in developing specifications to meet this need and Mileridge has provided support on many of these devel-

opments. Specifications for which Mileridge has provided support are:

- > The Aeronautical Information Exchange Model (AIXM) provides a means of exchanging aeronautical information intended for publication within an AIP.
- > The electronic AIP (eAIP) specification provides a means of publishing an AIP digitally, where the data

and presentation format are separated. This provides a means of publishing different products from the same data source.

- > The Airport Mapping Exchange Schema (AMXS) allows the exchange of information relating to airport mapping.

Contact us for more details:

[info@mileridge.com](mailto:info@mileridge.com)

## SES CERTIFICATION SUPPORT

Under the Single European Sky (SES) regulations, there is a need for service providers to have their operations certified against a set of Common Requirements. The EUROCONTROL SES Implementation Support activity has developed guidance for service providers and regulators and this provides an insight into the likely approach to be taken during the performance of an audit.

Mileridge has been closely involved in the preparation of material which allows an Air Navigation Service Provider (ANSP) to demonstrate the compliance of its Aeronautical Information Management (AIM) Business Unit against the Common Requirements; this work has been performed under contract to a major European ANSP. The

task involved significant effort and required that all parties worked in close collaboration. This ensures that not only is compliance with the require-



The Single European Sky aims to bring about more efficient flight.

ments stated, but that documentary evidence to support this may be provided. References for this work are available upon request.

This support may be provided for any party involved: either working with the ANSP to prove compliance or with the National Supervisory Authority (NSA) to ensure compliance is adequately demon-

strated.

By working closely with Mileridge, an approach to the certification may be developed which meets the individual needs of the organisations involved. This may be supported through the development of a certification report, presentation material and liaison with all parties involved.

Although certification is due by the end of this year, effort is needed now as the size of the task is considerable.

For information on how we can assist you with certification against the SES Common Requirements, please contact:

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## JUST FOR FUN...

Each newsletter will carry a short quiz, the questions relating to the aviation industry as a whole.

There is no prize. It is simply a bit of light-hearted relief to while-away those hours waiting at the airport.

The answers will be in the next edition of the newsletter and on our website at:  
[www.mileridge.com](http://www.mileridge.com)

**Question 1:**  
What is the wingspan of the new Airbus A380?

- A) 67.80m
- B) 79.80m
- C) 84.20m

**Question 2:**  
How tall is the winglet on a Boeing 737/700 Next Generation?

- A) 2.44m
- B) 2.52m
- C) 2.61m

**Question 3:**  
Taking the time of the three fastest direct flights from

Madrid, using Iberia, rank the three cities of Brussels, Dublin and Rome closest to furthest:

- A) Rome, Brussels, Dublin
- B) Dublin, Brussels, Rome
- C) Brussels, Rome, Dublin

**Question 4:**  
How many States are contracting members of the International Civil Aviation Organisation (ICAO):

- A) 172
- B) 189
- C) 193

**Question 5:**  
In what year did the first powered, heavier-than-air machine achieve controlled and sustained flight, with a pilot aboard?

- A) 1901
- B) 1903
- C) 1905

**Question 6:**  
In what year did the first edition of ICAO Annex 15 become applicable?

- A) 1953
- B) 1954
- C) 1955

## CHAIN – INTEGRITY COUNTS AND MILERIDGE SUPPORTS

(Continued from page 1)  
from origination to publication. In turn, these processes

*"The common aim -  
Safe and efficient  
flight operations.  
The common need -  
High quality  
aeronautical data"*  
Manfred Unterreiner  
CHAIN Activity Manager

involve a series of disconnected activities.

CHAIN comprises a number of activities, each looking to improve the situation through improved aware-

ness, operating procedures and systems.

Mileridge has been contracted by EUROCONTROL for the development of two key areas of the CHAIN activity:

### Guidance Material:

A package that is used by States to assess and improve the integrity of their data process.

### Service Level Agreements:

The establishment of SLAs is seen as a key component in improving data integrity. This package provides guidance

and advice aimed at the establishment of such agreements between the AIS/AIM unit and its data originators.

Mileridge was selected to support these tasks as it has staff with a proven track record of knowledge and experience of addressing data and quality management issues, including integrity, over a period of many years.

For information on how we can assist you with data integrity initiatives, please contact:

[integrity@mileridge.com](mailto:integrity@mileridge.com)