

ARISS International Delegates Meeting – Houston 2016

ARISS-Europe Report

1. ARISS-Europe Staff

ARISS-Europe Board has revised its Terms of Reference which has introduced the Honorary Chairman and made some others revisions. The approval of the new Terms of Reference is still pending by the ARISS Members.

a. Board Members:

Chairman : Emanuele D'Andria – IOELE

Technical Director: Oliver Amend – DG6BCE

Technical Counsellor: Jean Pierre Courjaud – F6DZP

Technical Counsellor: Bertus Hüsken – PE1KEH

Honorary Chairman: Gaston Bertels – ON4WF

(pending approval by ARISS Members)

b. QSL Manager : Christophe Candébat – F1MOJ

c. School Selection Manager: Francesco De Paolis – IK0WGF

d. Mentors:

Peter Kofler - IN3GHZ

Christophe Candébat, F1MOJ

Joseph Lemoine, F6ICS

Francesco de Paolis, IK0WGF

Marco Pernic, 9A8MM

Eskil van Loosdrecht, SM5SRR

Armand Budzianowski, SP3QFE

Marcelo Teruel, IK0USO

Séamus McCague, EI8BP

Florio Dalla Vedova, LX2DV

Gianpietro Ferrario, IZ2GOJ

Bertus Hüsken, PE1KEH

Howard Long – G6LVB

Ciaran Morgan, M0XTD

2. EuroSchools working group

From February 1 to April 30 2016, the ARISS School Selection Manager of the European region checked, collected and shared with the national school mentors the applications, authorizations and educational proposals available in a password-protected database. During the applications window, 56 requests were received from several countries: 25

France, 8 Italy, 5 Poland, 4 Spain, 3 UK, 2 Germany, 2 Ireland, 2 Belgium, 1 French Guyana, 1 Monaco, 1 Montenegro, 1 Luxemburg, 1 The Netherland.

Before the School Selection, the ARISS-International Educational outreach and School Selection Committee informed the EU Selection Manager about 12 slots for the European region in the first semester 2017.

In May 2016, the “EuroSchools” WG met weekly per web-conference and selected 26 applications, to be distributed in 12 slots in the first semester 2017 and 6 (telebridge) slots before end 2016.

Only 3 schools requesting a telebridge were not admitted (2 Italy, 1 Poland). 26 of 41 applications requesting a direct contact were not admitted in the ARISS program (7 France, 5 Italy, 3 Spain, 3UK, 2 Germany, 2 Ireland, 2 Poland, 1 Luxemburg, 1 The Netherland).

From September 1 to 30 November 2016, the ARISS School Selection Manager of the European region is checking, collecting and sharing with the national school mentors the applications, authorizations and educational proposals for the ARISS school contacts will tentatively be scheduled in the period extending from September 2017 to January 2018.

3. Ham Video

The ARISS UK Operations team, headed by Ciaran Morgan M0XTD, undertook a significant series of ARISS Schools Contacts with ESA Astronaut Tim Peake between January 2016 and May 2016 during his first mission to the International Space Station.

Tim Peake had indicated prior to launch that he was willing to activate the HamTV system currently on board Columbus. If this was achieved, it would have been the first time HamTV had been received during a scheduled ARISS Schools Contact.

The UK Operations team, with this knowledge, set about implementing a robust method of HamTV reception at each school that could be demonstrated to the audience. A fully mobile solution was implemented based on a Land Rover 4x4 vehicle and this was driven to each site and configured, along with the voice station, in full view of the students. To provide backup reception facilities, M0XTD, G3VZV and G8GTZ negotiated access to a 3.8m dish at the Goonhilly Satellite Earth Station and the signal was “backhauled”, via the internet, to the school in question.

The mission also saw, for the first time in the UK, the use of a backup station based in the Netherlands operated by Wouter, PA3WEG. This was used on many occasions due to the early loss of signal at the UK school due to the RF path between the ISS and school near to LOS. The use of PA3WEG permitted the reception of Tim Peake’s signoff at the majority of schools.

With major coordination activities between M0XTD, the ARISS Global Coordinator and Kenneth Ransom N5VHO at NASA, all ten contacts for the UK were scheduled as direct contacts.

Not only was HamTV successfully received at seven of the ten schools (it was not available at the other three due to other payload operation on orbit), but the UK contacts resulted in very significant publicity (national and local news media, inclusion in national TV and print media etc) but also unprecedented participation figures.

4. HAMTV Ground Segment

Six chained Ham Video ground stations cover the European continent in X formation:

- For descending passes:
 - o EI9FHB - Cork, Ireland
 - o F6DZP - Poitiers, France
 - o IK1SLD – Casale-Monferrato, north Italy
 - o Matera, south Italy (under construction)
- For ascending passes:
 - o CS5SS - Lissabon, Portugal (not yet operational)
 - o F6DZP - Poitiers, France
 - o IK1SLD – Casale-Monferrato, north Italy
 - o SP3PGZ – Kolo, Poland

The chained stations allow more than 10 minutes video and audio reception.

Video and audio are streamed by the chained ground stations to a dedicated password protected server. This server is located in Belgium and operated by AMSAT Belgium. The streams are automatically directed to the BATC server and made visible to the amateur radio community and to the general public on a Multi-Viewer screen.

For Ham TV school contacts, the school will connect to the password protected server.

Jean Pierre Courjaud F6DZP intends to develop software using the symbol packets from the chained stations and re-arranging them to produce an integrated video and audio stream, covering the whole pass over Europe. This innovative approach could be tested in late 2016 / beginning 2017.

5. Telebridge Stations

The Italian telebridge station IK1SLD in Casale Monferrato has reached 50 telebridge school contacts during its last contact on 8th October 2016.

Casale Monferrato Team is composed by IK1SLD [Claudio](#), IW1BND [Fabio](#), IZ1UWP [Giovanni](#) e IU1FHZ [Emiliano](#). A special thank to Massimo Canepa IW1CNF who is not still with us.

Respectfully submitted

Emanuele D'Andria – IOELE
ARISS-Europe chairman

Annex: ARISS-Europe Terms of Reference

ARISS-Europe Terms of Reference

I. Definitions

1. **ARISS** is the common working group of the national amateur radio and amateur satellite radio societies involved in Amateur Radio operations on board the **International Space Station** (ISS).
2. **ARISS** is the acronym of **Amateur Radio on the ISS**.
3. **ARISS-Europe** is a subgroup of the **ARISS international** working group.

II. Object

4. The object of ARISS-Europe is :
 - to plan, implement and co-ordinate amateur radio projects and activities on board the International Space Station
 - to build flight and monitoring equipment for ISS amateur radio
 - to carry out the technical and operational service for ISS amateur radio equipment
 - to develop operating procedures for ISS amateur radio
 - to plan future development of ISS amateur radio
 - to promote ISS amateur radio in the educational field and toward the general public
 - to organize and implement ARISS School Contacts, giving schoolchildren and students the opportunity to talk to astronauts and cosmonauts on board the ISS.

III. Membership

5. Membership of ARISS-Europe shall consist of :
 - European amateur radio societies of countries participating to the International Space Station which are members of the International Amateur Radio Union, Region 1 (IARU R1), involved in planning, organizing and coordinating Amateur Radio projects on board of the ISS

- European AMSAT societies introduced by their national IARU R1 society
 - other societies, wishing to contribute and introduced by their national IARU R1 society can be admitted as associate member without voting rights.
6. Founding ARISS-Europe Member Societies are :
- AMSAT-Belgium
 - AMSAT francophone
 - AMSAT-Italy
 - ARI
 - DARC
 - REF
 - RSGB
 - UBA
7. ESA astronauts who performed ARISS school contacts during their mission on board the International Space Station are honorary members.

IV. Administration

8. ARISS-Europe is administered by a Board consisting of :
- a chairman
 - a technical director
 - two technical counsellors
9. The members of the Board are elected for two years terms. They can be re-elected.
10. The renewal of the Board is to be organized by the chairman every uneven year :
- in March, the Member Societies are invited by the chairman to present candidates for the board (a chairman, a technical director, a secretary-treasurer and two technical counsellors)
 - in June, the chairman shall circulate the curriculum of the candidates by e-mail
 - each Member Society is invited to cast one vote for each seat
 - the votes are e-mailed by the Member Societies to the five members of the Board
 - ballot messages are accepted till the 1st of September
 - the results of the voting are circulated by the chairman by the 15th of September
 - the newly elected Board takes office on the 1st of October.

11. The members of the Board are also the ARISS-Europe delegates to ARISS international.
12. The Board can nominate a secretary. The secretary participates to the Board meetings but not to the voting.
13. A past chairman can be made honorary chairman by decision of the Board. An honorary chairman is invited to participate to the Board meetings as a consultant, without voting rights.
14. All ARISS administrative work is done by e-mail.
15. The chairman may convene an ARISS-Europe meeting if at least five Member Societies agree. ARISS-Europe meetings can be live or per teleconference. The agenda shall be circulated at least two weeks in advance.
16. Any Member Society may ask the chairman for an ARISS-Europe meeting.
17. Board meetings are convened by the chairman. Any Board member may ask the chairman for a Board meeting, live or per teleconference.
18. As far as possible, the ARISS-Europe administration shall be done on a no-cost basis.

V. Projects and activities

19. Groups or individuals volunteering to build equipment, carry out technical or operational service, develop procedures, etc. shall present their candidature to an ARISS-Europe Member Society. Only proposals introduced by Member Societies will be taken into consideration by the ARISS-Europe board.
20. Any project shall be fully documented. A feasibility study and a funding plan are required. Compliance with Amateur Radio rules is a prerequisite.
21. To be accepted, a project has to be approved by at least fifty percent of the ARISS-Europe Member Societies.
22. Approved projects shall be presented to the ARISS international Technical Evaluation and Support committee (TES).
23. ARISS approved projects are to be promoted by the Member Societies.

VI. Funding and Expenses

24. Any expenses related to any project shall be duly budgeted.
25. Member Societies may decide to participate to the funding of a common project.

26. Administrative and travel expenses shall be covered by each participating member.
27. No fee or any form of contribution may be imposed on the Member Societies.
28. Donations may be accepted to contribute to the funding.

Adopted by the Member Societies

MM, 2015

ARISS-Europe Terms of Reference

Annexes

ANNEX 1: ARISS-Europe Member Societies (per October 2015):

AMSAT-Belgium	Belgium	
AMSAT-France	France	
AMSAT-Italy	Italy	
AMSAT-SM	Sweden	
AMSAT-UK	UK	
ARI	Italy	
DARC	Germany	
MARL	Malta	(associate member)
PZK	Poland	
RAL	Lebanon	(associate member)
REF	France	
REP	Portugal	
RSGB	UK	
UBA	Belgium	
USKA	Switzerland	
VERON	The Netherlands	

ANNEX 2: ARISS-Europe honorary members (per October 2015):

Samantha Cristoforetti IZØUDF
Frank De Winne ON1DWN
Pedro Duque ED4ISS
Léopold Eyharts FXØSTD
Christer Fuglesang KE5CGR / SAØAFS
Alexander Gerst KF5ONO
André Kuipers PI9ISS
Paolo Nespoli IZØJPA
Luca Parmitano KF5KDP
Roberto Vittori IZ6ERU