

**GUIDELINES FOR AN  
AGREEMENT FOR THE  
SHARED USE OF RADAR  
SENSOR DATA**

**SUR.ET1.ST05.3000-GUI-01-00**

<b>Edition</b>	<b>:</b>	<b>1.0</b>
<b>Edition Date</b>	<b>:</b>	<b>November 1997</b>
<b>Status</b>	<b>:</b>	<b>Released Issue</b>
<b>Class</b>	<b>:</b>	<b>EATCHIP</b>

# DOCUMENT IDENTIFICATION SHEET

## DOCUMENT DESCRIPTION

### Document Title

Guidelines For An Agreement For The Shared Use of Radar Sensor Data

EWP DELIVERABLE REFERENCE NUMBER

**PROGRAMME REFERENCE INDEX**

SUR.ET1.ST05.3000-GUI-01-00

**EDITION :**

1.0

**EDITION DATE :**

November 1997

### Abstract

This document contains the guidelines for the drafting of agreements for the shared use of radar data.

### Keywords

Radar Data Sharing      EATCHIP

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## DOCUMENT STATUS AND TYPE

STATUS	CATEGORY	CLASSIFICATION
Working Draft <input type="checkbox"/>	Executive Task <input type="checkbox"/>	General Public <input type="checkbox"/>
Draft <input type="checkbox"/>	Specialist Task <input checked="" type="checkbox"/>	EATCHIP <input checked="" type="checkbox"/>
Proposed Issue <input type="checkbox"/>	Lower Layer Task <input type="checkbox"/>	Restricted <input type="checkbox"/>
Released Issue <input checked="" type="checkbox"/>		

## ELECTRONIC BACKUP

**INTERNAL REFERENCE NAME :**

HOST SYSTEM	MEDIA	SOFTWARE(S)
Microsoft Windows	Type : Hard disk	
	Media Identification :	

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### DOCUMENT APPROVAL

The following table identifies all management authorities who have successively approved the present issue of this document.

AUTHOR`ITY	NAME AND SIGNATURE	DATE
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**DOCUMENT CHANGE RECORD**

The following table records the complete history of the successive editions of the present document.

<b>EDITION</b>	<b>DATE</b>	<b>REASON FOR CHANGE</b>	<b>SECTIONS PAGES AFFECTED</b>
1.0	November 1997		

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## TABLE OF CONTENTS

<b>DOCUMENT IDENTIFICATION SHEET</b> .....	<b>ii</b>
<b>DOCUMENT APPROVAL</b> .....	<b>iii</b>
<b>DOCUMENT CHANGE RECORD</b> .....	<b>iv</b>
<b>TABLE OF CONTENTS</b> .....	<b>v</b>
<b>1. FOREWORD</b> .....	<b>1</b>
<b>2. SCOPE</b> .....	<b>3</b>
<b>3. REFERENCE DOCUMENTS</b> .....	<b>5</b>
<b>4. ABBREVIATIONS AND ACRONYMS</b> .....	<b>7</b>
<b>5. PROPOSED TEXT FOR THE AGREEMENT</b> .....	<b>9</b>
<b>ANNEXES</b>	
<b>ANNEX A OTHER PARTIES ( IF APPLICABLE)</b> .....	<b>15</b>
<b>ANNEX B INTERFACE SPECIFICATION</b> .....	<b>17</b>
<b>ANNEX C MAINTENANCE</b> .....	<b>21</b>
<b>ANNEX D COST</b> .....	<b>23</b>
<b>ANNEX E CORRESPONDENCE</b> .....	<b>25</b>

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## 1. FOREWORD

1.1 The present document concerns the guidelines for the drafting of agreements for the shared use of radar data.

1.2 This document is related to the Specialist Task (ST) 05-3000 of the Executive Task (ET) 1 of the surveillance domain of the EATCHIP Work Programme.

1.3 These guidelines were constituted from:

- the Agreement for the Provision of radar data through the RADNET radar network;
- the agreement between Spain and France regarding the sharing of the secondary radar coverage from the station at Espiñeiras (La Coruña) Spain;
- the Agreement for the Provision of Radar Data between the Azienda Autonoma di Assistenza al Volo per il Traffico Aero Generale and Schweizerische Aktiengesellschaft für Flugsicherung;
- the Agreement between Germany and Switzerland regarding the shared use of radar data from the Gosheim radar station;
- a typical example of a radar data agreement as used by the CAA to supply radar data.

1.4 Although this document is not a Eurocontrol Standard, the format of this document complies with the Directives for the Uniform Drafting and Presentation of Eurocontrol Standards (Reference 1).

Notes containing extra information on the use of the proposed contract text are printed in light face too, the status being indicated by the prefix **NOTE**.

1.5 The original version of this document is in the English language.

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## **2. SCOPE**

**2.1** This document constitutes the Eurocontrol Guideline concerning the drafting of an agreement for the shared use of radar data between ATS Organisations within the framework of the EATCHIP programme. This document contains the proposed text for a bilateral sharing agreement for radar data. The changes required to make it a multilateral sharing agreement for radar data are put in as suggestions.

**2.2** The agreement consists of the proposed text for nine numbered articles and five annexes, named Annex A up to Annex E. These annexes contain information which is likely to change from time to time. Deviations from the proposed text in the agreement as well as in the annexes, can be necessary due to legal, organisational or technical reasons. Examples of such changes are:

- The starting date could be set to the date the radar data has been delivered for the first time;
- The notice period to end the contract could be chosen differently;
- When installation at the providers' premises requires, i.e. additional staff, the cost could be charged to the user.

The clauses enclosed in brackets ([]) should be replaced by the information described in these clauses.

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### **3. REFERENCE DOCUMENTS**

The following documents and standards contain provision which, through reference in this text, constitute provisions of the document. At the time of publication of this document the editions indicated for the referenced documents were valid.

Revisions of the referenced documents shall not form part of the provisions of this document until they are formally reviewed and incorporated into this document.

In case of conflict between this document and the contents of these other referenced documents, this document shall take precedence.

1. Eurocontrol Standard 000-1-93, Edition 1, Directives for the Uniform Drafting and Presentation of Eurocontrol Standard Documents.
2. Eurocontrol Standard SUR.ET1.ST05.2000-STD-01-01, Status Proposed, Radar Data Exchange, Part 1: All Purpose Structured Eurocontrol Radar Information Exchange - ASTERIX

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#### 4. **ABBREVIATIONS AND ACRONYMS**

For the purposes of these guidelines the following are used:

ASTERIX	All Purpose Structured Eurocontrol Radar Information Exchange
ATC	Air Traffic Control
ATS	Air Traffic Services
CAA	Civil Aviation Authorities
EATCHIP	European Air Traffic Control Harmonization and integration Programme
ET	Executive Task
NM	Nautical Mile(s)
RADNET	Radar Data Network
ST	Specialist Task
SURT	Surveillance Team (EATCHIP)

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## 5. PROPOSED TEXT FOR THE AGREEMENT

The [name of the State's responsible Organisation or name of the (privatised) ATC Organisation] represented by [function],

hereinafter called "the *Provider*",

and

The [name of the State's responsible Organisation or name of the (privatised) ATC Organisation] represented by [function],

hereinafter called "the *User*";

**Suggestion:** If there are more than one Provider or more than one User, the above lines are to be repeated for each Provider or User.

In case the Providers are also Users (e.g. each party supplies information from a radar to the other party), one can replace the words Provider and User with the names of the Organisations and indicate in Annex B who is Provider and who is User for each type of radar data.

- Having regard to the EATCHIP programme objectives, including the optimisation of the provision and use of the radar surveillance function through the installation of new facilities or the sharing of radar data;
- With a view to improving the continuity, quality and track position accuracy of multi radar trackers, to refining trajectory prediction and conflict detection and to achieving the EATCHIP objective of the establishment of a 5 nautical miles separation through the airspace of the Flight Information Regions falling within the competence of the parties to the present Agreement;

**NOTE-** More reasoning and motivations for the contract can be inserted here

- Have agreed as follows:

### ARTICLE 1 - Objective of the Agreement

1. The objective of this Agreement is to improve radar coverage and radar data availability in the Flight Information Regions for which the *User* is responsible.
2. For this purpose, the *Provider* shall provide radar data to the *User*.
3. The radar data to be provided are specified in Annex B.

**ARTICLE 2 - Limitations**

1. The *User* shall use the radar data provided only to ensure the safe, proper and continuous operation of his Air Traffic Services or activities in support of Air Traffic Services and for technical demonstration, evaluation and test purposes related to his operational tasks, unless otherwise specified in Annex A.
2. The *User* shall not communicate to any party not specified in this Agreement in any matter of form whatsoever any information supplied pursuant to this Agreement. The said information shall not be used for any purpose other than those specified in paragraph 1 hereof, without the prior written consent of the *Provider*.

**ARTICLE 3 - Installation**

1. The *User* shall provide at his own expense any equipment, including spare parts, as specified in Annex B necessary for the provision of the radar data at the *Provider's* premises and the *User's* premises.
2. Unless otherwise specified in Annex D, the *Provider* shall install free of charge the equipment at the *Provider's* premises and the *User* shall install at his expense the equipment at the *User's* premises.
3. The *User* shall arrange for the provision, installation and commissioning of private circuits as specified in Annex B, required for the transmission of the radar data from the *Provider* to the *User*.
4. Initial testing of the equipment and private circuits for the provision of the radar data shall be carried out in conjunction with the *Provider* and the *User*.
5. The provision of the present article shall also apply in the event of modifications to the equipment or private circuits.



#### **ARTICLE 4 - Maintenance**

1. Unless otherwise specified in Annex C, the routine maintenance, repair and replacement service for the equipment installed for the provision of radar data under this Agreement shall be executed by technical staff available at the Provider's and at the User's premises.
2. Unless otherwise specified in Annex D, the routine maintenance, repair and replacement at the Provider's premises referred to in paragraph 1 hereof shall be carried out free of charge by the Provider to the standards of maintenance commonly adopted by the Provider.
3. The routine maintenance, repair and replacement at the User's premises shall be done by and at the expense of the *User* to the standard of maintenance commonly adopted by the *User*.

#### **ARTICLE 5 - Modifications**

1. The *User* is obliged to implement at his own expense any modification in the equipment for the provision of radar data at the Provider's and at the User's premises as well as for private circuits due to any decision of the *Provider*.
2. The *User* may propose technical modifications of the specifications for the provision of radar data to the *Provider*. The *Provider* shall decide on the implementation of it.
3. The modifications to be implemented shall be specified by the *Provider* in writing to the *User* not less than six months before the date the modification shall be implemented.

#### **ARTICLE 6 - Cost**

1. This Agreement is made under the prerequisite that initial and periodic cost for equipment and private services arising as a result of this Agreement shall be borne by the *User*.
2. Unless otherwise specified in Annex D, the use of radar data as specified in Annex B shall be free of charge.
3. Cost for commissioning and periodic checks of private circuits, levies, customs and any other initial cost as well as periodic costs in respect of rental of lines or any other equipment shall be borne by the *User*.
4. Cost for modifications shall be borne by the *User* in accordance and as specified by the *Provider* in writing to the *User*.

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**ARTICLE 7 - Integrity**

1. The *Provider* shall take all possible steps, in accordance with the standards commonly adopted by him, to maintain the quality and continuity of the provision of radar data of the facilities specified in Annex B.
2. Where this is reasonably practicable the *Provider* shall give the *User* such notice in respect to any planned periodic break in service as soon as such information is available and a minimum of 24 hours notice in case of any other planned break in service.
3. As specified in Annex C, the *Provider* shall report immediately or at the earliest reasonable opportunity any failure in the provision of the radar data to the *User's* technical supervisor centre.

**ARTICLE 8 - Liability**

1. The *Provider* shall not be considered liable for any break in the provision of radar data which is due to any failure or defect of private circuit.
2. Under no circumstances shall the *Provider* be liable for any direct or consequential costs, loss or damage arising out of any break in the continuity, or impairment in the quality, of the data provided.
3. *Any User of the provided data* shall indemnify the *Provider* and any of his staff (either permanent or under contract) against any costs, charges, losses, expenses, demands, claims or other actions and damages or other liability suffered or incurred by, made upon or instituted against the *Provider* or any of his staff, arising directly or indirectly from this Agreement.
4. The indemnity referred to in paragraph 3 above shall apply, *inter alia*, to any injury (including sickness and death), loss or damage which occurs in connection with or as a result of:
  - (i) the provision of radar data by the *Provider*.
  - (ii) any failure or defect of private circuits.
  - (iii) any failure or defect of equipment referred to in Annex B.
  - (iv) the installation, commissioning, modification as well as maintenance, repair and replacement of any such equipment referred to in sub-paragraph (iii) hereof.
  - (v) any defect in, or malfunction of, any other equipment which is connected to the equipment referred to in sub-paragraph (iii) hereof.

### **ARTICLE 9a - Legal Aspects**

1. It is understood that nothing in this Agreement shall prejudice or detract from the primary obligation of the Authorities whether under statute or otherwise, to ensure the safe, proper and continuous operation of Air Traffic Services.
2. The *Provider* shall not be in breach of this agreement if any failure to perform its duties or to provide the radar data as specified in Annex B arises from or is caused by any reason beyond its control constituting force majeure including.
3. This Agreement constitutes the entire agreement between the parties.
4. This Agreement shall be governed by the law at the residence of the *Provider*.

**NOTE-** The next article should replace the previous one, if Eurocontrol is one of the contracting parties. If both parties are Eurocontrol members, the parties might consider to use the next article, replacing the previous one.

### **ARTICLE 9b - Settlement of Dispute**

1. Any dispute which may arise between the parties of this Agreement relating to the interpretation or application of the Agreement, or of the Annexes thereto, and which it has not been possible to settle by direct negotiation or by any other method shall be referred to arbitration at the request of any one of the contracting Parties.
2. For that purpose, each of the contracting Parties shall in each case nominate an arbitrator, and the arbitrators shall agree on the nomination of a third arbitrator. Should one of the Parties not have nominated its arbitrator within two months of the date of receipt of the request of the other Party, or should the nominated arbitrators fail, within those two months, to agree on the nomination of the third arbitrator, any Party may request the President of the International Court of Justice to make the nominations.
3. The arbitral tribunal shall determine its own procedure
4. Each contracting Party shall bear the costs of its own arbitrator and its representation in the proceedings before the tribunal; the costs of the third arbitrator and the other costs shall be borne equally by the Parties to the dispute. The arbitral tribunal may, however, determine a different sharing of costs if it thinks fit.
5. The decisions of the arbitral tribunal shall be binding on the Parties to the dispute.

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**ARTICLE 10 - Correspondence**

1. Correspondence to be applied in the framework of this Agreement is specified in Annex E.

**ARTICLE 11 - Annexes**

1. Annex A, B, C, D and E are attachments to this Agreement. The Provider and User, in mutual consent and formal acceptance, are allowed to amend and up-date, as circumstances deem necessary, the contents of the Annexes, in so far as the amendments are not in contradiction to or out of scope with the text in this Agreement.

**ARTICLE 12 - Duration**

1. The present Agreement shall enter into force on the day on which it is signed by the last of the contracting Parties, for a period of five years.
2. Thereafter, that period shall be automatically prolonged for periods of three years, unless any of the contracting Parties has, by giving written notice at least one year before the expiry of the current period, terminated the Agreement.
3. The Agreement can early terminate in the event the provision of radar data as specified in Annex B hereof is to be permanently withdrawn from service. The *Provider* shall give to the *User* not less than one year's notice in writing in advance thereof.
4. The Agreement can early terminate on request of the *User* in the event of modifications to be implemented. The *User* shall give to the *Provider* not less than three months' notice in writing in advance thereof.

In witness whereof, the undersigned having been duly authorised, sign the present Agreement.

Done at [place] on [date] in the English language in [number] originals.

**NOTE-** If the Agreement is in more than one language the following text can be used to replace the previous paragraph.

Done at [place] on [date] in the English, [other language(s)] languages in [number] originals. In the event of any inconsistency, the text in the [language] language will prevail.

For [State's Organisation/name of the (privatised) ATC Organisation, Provider] :

[ name ]

[ function ]

For [State's Organisation/name of the (privatised) ATC Organisation, *User*] :

[ name ]

[ function ]

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## **ANNEX A. OTHER PARTIES (IF APPLICABLE)**

### **A.1** In the Framework of this Agreement

- Having regard to Article 2 : Limitations,

the *Provider* authorises the *User* to communicate the provided radar data to the following parties :

- the name of the party
- the name of the party

### **A.2** For that purpose, the *User* to this Agreement shall arrange for (an) identical Radar Sharing Agreement(s) acting as provider, with the specified parties.

**NOTE-** Whenever the user wants to supply the radar data or a processed version thereof to a third party, the name of the third party has to be added to the list in this annex. The sharing agreement made between the user and the third party must be approved by the provider in writing. The provider decides whether it is necessary to update this agreement between provider and user(s).

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## **ANNEX B. INTERFACE SPECIFICATION**

**B.1** This Annex describes the Interface Specification, needed for the interfacing between the Provider and the User to share radar data.

**NOTE-** If more than one interface needs to be described, these interfaces can be described in B.2 and further. These paragraphs can have the same layout as in paragraph B.1.

### **B.2 Interface Name**

#### **B.2.1 Data Elements**

**NOTE-** List (preferable a table) of all data elements passing the interface. Where possible, reference can be made to the EUROCONTROL Standard for Radar Data Exchange (document reference 2).

The following information (if applicable) should be provided for each data element:

- identifier;
- a brief description of the element;
- the units of measurement for the element;
- the limits or range for the element;
- precision and resolution;
- presentation and format

#### **B.2.2 Message Description**

**NOTE-** A description of all messages, consisting of one or more the data elements, described in paragraph B.1.1, should be provided. Where possible, reference can be made to the EUROCONTROL Standard for Radar Data Exchange (document reference 2).

**B.2.3. End to End Protocol**

**NOTE-** All relevant aspects of the application to application protocol should be described (using drawings when necessary).

The following items should be covered:

- initiation;
- frequencies;
- expected and unexpected responses;
- priorities;
- time-outs;
- error messages.

**B.2.4 Communication Protocol**

**NOTE-** All relevant aspects of the communication protocol should be stated:

- version of the communication protocol (e.g. X25 CITT 1984);
- options used of the protocol (e.g. SVC);
- parameter settings (e.g. timers, frame length, window);
- addressing issues (addresses used);
- speed (bit rates);
- start-up parameters.

**NOTE-** The lay-out should reflect the different layers of the communication protocol (if applicable).

**B.2.5 Physical Aspects**

**NOTE-** Specifications of all physical items (equipment, private circuits, etc.), including spare parts, necessary to install and maintain the interconnection should be given.

For each item a sub-paragraph should be used. Example:

**B.2.5.1 Modem**

**B.2.5.2 Leased Line**

**B.2.5.3 Exception Handling**

**NOTE-** All aspects of a start up, close down, line interruptions, overload, etc. should be described here. References can be made to the end to end protocol and communication protocol paragraphs, if relevant, and describe here the interaction between the two protocols.

**B.2.5.4 Load Scenarios**

**NOTE-** Relevant load figures (frequency, number of messages, line load) for the interface should be given.

**B.2.5.5 Notes**

**NOTE-** This paragraph may contain useful general information.

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## **ANNEX C. MAINTENANCE**

**C.1** The maintenance, repair and replacement service for equipment installed at the Provider's and the User's premises shall include the following activities during normal working hours:

- routine maintenance, repair and replacement service for the equipment installed at the Provider's and the User's premises;
- support by staff for testing the equipment and modifications.

**C.2** During as well as outside normal working hours, the maintenance service at their premises shall be carried out by the *Provider* and the *User* in accordance with the standards of maintenance commonly adopted by the *Provider* and the *User*.

**C.3** The *User* shall collect and replace any faulty equipment or spare part, subject of this Agreement, at the Provider's and the User's premises.

The *User* shall procure at its own expense the following maintenance and repair support service contracts:

- [equipment] with [maintenance and repair support agency]  
.....
- [equipment] with [maintenance and repair support agency]

**C.4** For routine co-ordination and report the following technical supervisor centres shall be responsible:

At the Provider's premises : [telephone and fax number]

At the User's premises : [telephone and fax number]

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## **ANNEX D. COST**

### **D.1 General**

As radar replacement programmes so far are planned and executed according to national requirements, the existing radars and replacement radars are established to serve the national Air Traffic Services (ATS). "Transfrontier" additional users in general can benefit from these existing radars to meet the EATCHIP objectives for radar coverage and availability, and the objective to achieve a 5 NM separation.

In addition, the use of these radars for civil and military ATS and activities in support of ATS will improve civil/military co-ordination and promote the flexible and safe use of the airspace.

### **D.2 Cost**

Suggestion:

The cost for the sharing of the radar data itself, as agreed between provider(s) and user(s) should be specified here. When the data is supplied free of charge it should be mentioned here too. The consequences of requesting a price for cross boundary radar data is under consideration in the frame of the EATCHIP programme.

### **D.3 Installation Cost**

The cost of installing private circuits and the equipment for the provision of radar data which is the subject of this Agreement, shall be borne by the *User*.

### **D.4 Maintenance Cost**

The routine maintenance, repair and replacement service for the equipment installed for the provision of radar data subject of this Agreement shall be borne as agreed in Article 4 -Maintenance, and Annex C - Installation and Maintenance.

### **D.5 Periodical Cost**

Periodic cost of rental of private circuits, private circuit line checks, service contracts or any other periodic rent or fee shall be borne by the *User*.

The use at the Provider's premises and the User's premises of any installation space and the use of the power supply shall be free of charge for the *User*.

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## **ANNEX E. CORRESPONDENCE**

All correspondence in connection with this agreement shall be mail as follows:

[Provider State's Organisation or name of ATC Organisation, mail address,  
telephone and fax number]

[User State's Organisation or name of ATC Organisation, mail address,  
telephone and fax number]

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