Coordination agreement
between France and Germany
in the Frequency bands
1710 - 1785 MHz and 1805 - 1880 MHz

France and Germany agree on the following coordination procedure in the frequency bands 1710 - 1785 MHz and 1805 - 1880 MHz. The first part of this coordination agreement deals with the frequency coordination between DCS 1800 systems in France and Germany. The second part of this agreement deals with the frequency coordination between DCS 1800 in Germany and radio relay in France. The third part of this agreement deals with the frequency coordination between DCS 1800 in France and radio relay in Germany.

In case that unexpected difficulties in applying this agreement emerge, both administrations agree to meet again and discuss the agreement and if necessary revise this agreement.

1. Frequency coordination between DCS 1800 systems in France and Germany:

France and Germany agree that the frequency coordination between DCS 1800 systems on both sides of their border shall be based on the "Agreement between the telecommunications administrations of Austria, Belgium, France, Germany, Luxembourg, the Netherlands and Switzerland on the frequency coordination of systems using DCS 1800 standards in the frequency bands 1710 - 1785 MHz and 1805 - 1880 MHz".

However, as an exception from the allotment of preferential and non-preferential frequencies laid down in the above-mentioned multilateral agreement, the frequency channels 862 and 863 shall be preferential channels of France instead of Germany.

In accordance with the multilateral agreement, both Administration will inform each other of their intention to use DCS 1800.
2. Frequency coordination between DCS 1800 in Germany and radio relay in France:

The frequency coordination procedure is based on the concept of protecting the fixed services in France from the interference of DCS 1800 systems in Germany. For this coordination procedure we distinguish the following two cases:

2.1 Tactical radio relay (in F) and DCS 1800 (in D)
2.2 Fixed radio relay (in F) and DCS 1800 (in D).

2.1 Tactical radio relay (in F) and DCS 1800 (in D)

The coordination procedure is described by the flowchart in Annex 1.

Germany informs France as soon as possible of all DCS 1800 base stations within a distance of 50 km within the German territory. The technical characteristics of the DCS 1800 base stations to be provided by Germany shall be in accordance with Annex 2 of the Vienna Agreement 1993.

The calculations concerning tactical radio relay are performed by France with a calculation method and propagation model of its choice. If no interference occurs in practical operation, every method of calculation is acceptable for Germany. It is not necessary for France to provide Germany with the information concerning the operation of tactical radio relay.

2.2 Fixed radio relay (in F) and DCS 1800 (in D)

Existing radio relay links shall be protected, irrespective of the preferential frequency arrangements for the coordination of DCS to DCS given in chapter 1.

The coordination procedure is described by the flowchart in Annex 2.

All French fixed radio relay links to be protected are given in Annex 3.
3. Frequency coordination between DCS 1800 in France and radio relay in Germany

The frequency coordination procedure is based on the concept of protecting the fixed services in Germany from the interference of DCS 1800 systems in France. For this coordination procedure we distinguish the following two cases:

3.1 Tactical radio relay (in D) and DCS 1800 (in F)
3.2 Fixed radio relay (in D) and DCS 1800 (in F)

3.1 Tactical radio relay (in D) and DCS 1800 (in F)

The coordination procedure is described by the flowchart in Annex 4.

France informs Germany as soon as possible of all DCS 1800 base stations within a distance of 50 km within the French territory. The technical characteristics of the DCS 1800 base stations to be provided by France shall be in accordance with the Annex 2 of the Vienna Agreement 1993.

The calculations concerning tactical radio relay are performed by Germany with a calculation method and propagation model of its choice. If no interference occurs in practical operation, every method of calculation is acceptable for France. It is not necessary for Germany to provide France with the information concerning the operation of tactical radio relay.

3.2 Fixed radio relay (in D) and DCS 1800 (in F)

Existing radio relay links shall be protected, irrespective of the preferential frequency arrangements for the coordination of DCS to DCS given in chapter 1.

The coordination procedure is described by the flowchart in Annex 5.

All German fixed radio relay links to be protected are given in Annex 6.
4. Date of entry into force

This agreement will enter into force the 14th of July 1994.

Annex 1: Coordination procedure for tactical radio relay (in F) and DCS 1800 (in D)
Annex 2: Coordination procedure for existing fixed radio relay (in F) and DCS 1800 (in D)
Annex 3: List of French radio relay to be protected
Annex 4: Coordination procedure for tactical radio relay (in D) and DCS 1800 (in F)
Annex 5: Coordination procedure for existing fixed radio relay (in D) and DCS 1800 (in F)
Annex 6: List of German radio relay to be protected

Done at Mainz, 6th of July 1994.

For the Administration of France

[Signature]
Michel Monnot

For the Administration of Germany

[Signature]
Thomas Heutmann

[Signature]
Amiral Pichevin
Annex 1

Coordination procedure for tactical radio relay (in F) and DCS 1800 (in D)

D provides F with the relevant technical information about all BS within a distance of about 50 km within the German territory.

F plans to set up a temporary tactical radio relay link.

F selects a site for a tactical radio relay based on the data provided by D.

F calculates, if the interfering signal of the tactical radio relay link at the DCS 1800 BS site is:
  - on BS receive frequencies < 38 dBµV/m - 9 dB (actual antenna heights)
  - on MS receive frequencies < 42 dBµV/m - 9dB (antenna heights assumed 10 m)

The link can't be implemented.

The link can be implemented.

BS: base station
MS: mobile station
Coordination procedure for:
DCS - existing fixed radio relay

Fixed radio relay links of France are given in Annex 3

D plans to set up a new BS or plans to use new frequencies for a BS already in operation

D checks if there are any radio relay sites within a circle of appr. 200 km of the BS

no

The interference signals from the new and existing BS (and MS) are summed up

Is the total interfering signal from new and existing DCS 1800 stations less than the maximum defined in Annex 3?

no

The frequency can't be used by the new BS

no

D calculates, if the interfering signal of the fixed radio relay link at the DCS 1800 BS site is:

< 38 dBuV/m - 9 dB On BS receive freq. (actual antenna heights)
< 42 dBuV/m - 9 dB On MS receive freq. (antenna heights assumed 10 m)

no

The operator decides if the site will be used

yes

continued on the next page

BS: base station
MS: mobile station
Continuation from the previous page

Are preferential frequencies to be used by this BS?

no

Are the requirements for fieldstrength and distance met given in CEPT Rec T/R 22-07?

no

Are the requirements for fieldstrength and distance met given in CEPT Rec T/R 22-07?

yes

The new site can be used by the DCS 1800 BS

The new site can't be used by the DCS 1800 BS without further coordination

The new site can be used by the DCS 1800 BS

Coordination with F successful?

Yes

The new site can be used by the DCS 1800 BS

No

The new site can't be used by the DCS 1800 BS
Annex 3: List of French radio relay to be protected

1. List of stations:

<table>
<thead>
<tr>
<th>Station number</th>
<th>Station name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Metz Delattre</td>
</tr>
<tr>
<td>2</td>
<td>Metz Jussy</td>
</tr>
<tr>
<td>3</td>
<td>Saulny</td>
</tr>
<tr>
<td>4</td>
<td>Laufredang</td>
</tr>
<tr>
<td>5</td>
<td>Rohrbach</td>
</tr>
<tr>
<td>6</td>
<td>Laufredang</td>
</tr>
<tr>
<td>7</td>
<td>Dabo</td>
</tr>
<tr>
<td>8</td>
<td>Amance</td>
</tr>
<tr>
<td>9</td>
<td>Ars</td>
</tr>
<tr>
<td>10</td>
<td>Eschergange</td>
</tr>
<tr>
<td>11</td>
<td>Amance</td>
</tr>
<tr>
<td>12</td>
<td>Luneville Treu</td>
</tr>
<tr>
<td>13</td>
<td>Servance 1</td>
</tr>
<tr>
<td>14</td>
<td>Beuzevin</td>
</tr>
</tbody>
</table>

2. The technical characteristics and protection criteria of these links are the subject of a separate document.
Coordination procedure for tactical radio relay (in D) and DCS 1800 (in F)

F provides D with the relevant technical information about all BS within a distance of about 50 km within the French territory.

D plans to set up a temporary tactical radio relay link.

D selects a site for a tactical radio relay based on the data provided by F.

D calculates, if the interfering signal of the tactical radio relay link at the DCS 1800 BS site is:
- on BS receive frequencies < 38 dBµV/m - 9 dB (actual antenna heights)
- on MS receive frequencies < 42 dBµV/m - 9 dB (antenna heights assumed 10 m)

yes

The link can be implemented.

no

The link can’t be implemented.

BS: base station
MS: mobile station
Coordination procedure for: DCS - existing fixed radio relay

Fixed radio relay links of Germany are given in Annex 6.

F plans to set up a new BS or plans to use new frequencies for a BS already in operation

F checks if there are any radio relay sites within a circle of approx. 200 km of the ES

The interference signals from the new and existing BS (and MS) are summed up

Is the total interfering signal from new and existing DCS 1800 stations less than the maximum defined in Annex 6?

The frequency can't be used by the new BS

F calculates, if the interfering signal of the fixed radio relay link at the DCS 1800 ES site is:

< 33 dBµV/m - 9 dB On ES receive freq. (actual antenna heights)
< 42 dBµV/m - 9 dB On MS receive freq. (antenna heights assumed 10 m)

The operator decides if the site will be used

no

The new site won't be used by the operator

yes

continued on the next page

ES: base station
MS: mobile station
Continuation from the previous page

Are preferential frequencies to be used by this BS?

Are the requirements for fieldstrength and distance met given in CEPT Rec T/R 22-07?

Yes

The new site can be used by the DCS 1800 BS

No

The new site can't be used by the DCS 1800 BS

Yes

The new site can be used by the DCS 1800 BS

No

The new site can't be used by the DCS 1800 BS

Coordination with D successful?
Annex 6: List of German radio relay to be protected

The German Administration will provide the list and technical characteristics of fixed radio relay links to the French Administration. The necessary protection criteria will be agreed on a case by case basis by both Administrations.