ANNEX

GPS AND GALILEO SIGNAL STRUCTURES

(1) For reasons of National Security Compatibility, avoidance of unacceptable radio-frequency interference, and suitability of GNSS performance, the Parties agree to the baseline signal structures described below:

- The GALILEO secured governmental service in the 1559-1610 MHz band using a Binary Offset Carrier (BOC) cosine phased modulation with a 15.345 MHz sub-carrier frequency and a code rate of 2.5575 mega-chips per second (Mcps) centred at 1575.42 MHz (cosine phased BOC (15, 2.5)), and a signal power as specified in the document, referred to below, entitled "Reference Assumptions for GPS/GALILEO Compatibility Analyses."

- The GALILEO signal structures used for any or all other services, including the Open Service (OS), Safety-of-Life service (SoL), and Commercial Service (CS), in the 1559-1610 MHz band using a Binary Offset Carrier (BOC) modulation with a 1.023 MHz sub-carrier frequency and a code rate of 1.023 mega-chips per second (Mcps) (BOC (1,1)) centred at 1575.42 MHz, and a signal power as specified in the document, referred to below, entitled "Reference Assumptions for GPS/GALILEO Compatibility Analyses."

- The GPS signal structure in the 1559-1610 MHz band, centred at 1575.42 MHz, will be a Binary Phase Shift Key (BPSK) modulation with a code rate of 1.023 Mcps; a BPSK modulation with a code rate of 10.23 Mcps; and a BOC modulation with a 10.23 MHz sub-carrier frequency and a code rate of 5.115 Mcps, and a signal power as specified in the document, referred to below, entitled "Reference Assumptions for GPS/GALILEO Compatibility Analyses." In the future, a BOC (1, 1) modulation centred at 1575.42 MHz will be added to this signal structure.

(2) The classified assumptions and methodology used to determine the National Security Compatibility criteria, and the criteria themselves, are contained in the following documents: National Security Compatibility Compliance for GPS and GALILEO Signals in the 1559-1610 MHz Band, Part 1, Part 2 and Part 3, (hereinafter, "Part 1," "Part 2," and "Part 3," respectively) dated 9 June 2004, including any future amendments, changes or modifications to these documents as mutually agreed in accordance with paragraph 6.a. of this Annex. Access to Part 1, Part 2 and Part 3 shall be only by the United States and those Member States that are a party to a General Security of Military Information Agreement (hereinafter "GSOMIA") or a General Security of Information Agreement (hereinafter "GSOIA") with the United States, which shall apply to the access, maintenance, use and release of these classified documents. Should an applicable agreement regarding security of information between the European Community and the United States be concluded in the future, it shall govern the access, maintenance, use and release of Part 1, Part 2 and Part 3. For the time being, representatives of the European Commission and staff members of the GALILEO Joint Undertaking and European Space Agency shall be granted oral and visual access to Part 2 for the purposes of implementation of and compliance with this Agreement, on the basis of an established security clearance with a Member State that has a GSOMIA or GSOIA with the United States, in accordance with the national security procedures and laws of the Member State, and with the GSOMIA or GSOIA with the United States. Representatives of the European Commission and staff members of the GALILEO Joint Undertaking and European Space Agency shall be granted access to Part 1 and Part 3 in accordance with applicable security rules. The classified information shall at all times be protected and handled only in facilities with an appropriate facility security clearance in accordance with the applicable security procedures, laws and the GSOMIA or GSOIA.

(3) Assumptions for radio frequency signal compatibility analyses are contained in the following document: "Reference Assumptions for GPS/GALILEO Compatibility Analyses", 9 June 2004 including any future amendments, changes or modifications to this document as mutually agreed by the Parties.

(4) Methodology for radio frequency compatibility analysis is contained in the following document: "Models and Methodology for GPS/GALILEO Radio Frequency Compatibility Analyses", dated 18 June 2004, including any future amendments, changes or modifications to this document as mutually agreed by the Parties.

(5) The provision of the time offsets between GALILEO and GPS system time in the navigation messages of their respective services is outlined in the following document: "GPS/GALILEO Time Offset Preliminary Interface Definition" dated 20 March 2003, including any future amendments, changes or modifications to this document as mutually agreed by the Parties.

(6) (a) Notwithstanding Article 20, paragraph 6, any future amendments, changes or modifications to the documents entitled "National Security Compatibility Compliance for GPS and GALILEO Signals in the 1559-1610 MHz Band, Part 1, Part 2 and Part 3" shall be decided by mutual agreement by a sub-group of the working group established under Article 13, paragraph 2 (d), composed of representatives of the United States on the one hand, and representatives of the European Commission, acting on behalf of the European Community, who have access to these classified documents in accordance with paragraph 2 of this Annex, and representatives of those Member States who have access to these classified documents in accordance with paragraph 2 of this Annex, on the other hand. These decisions shall be binding on the Parties.

(b) Notwithstanding Article 20, paragraph 6, any future amendments, changes or modification to the following documents shall be adopted by mutual agreement between appropriate representatives of the Parties in the working group established under Article 13, paragraph 2(a), including the United States: "Reference Assumptions for GPS/GALILEO Compatibility Analyses"; "Models and Methodology for GPS/GALILEO Radio Frequency Compatibility Analyses"; "GPS/GALILEO Time Offset Preliminary Interface Definition." These decisions shall be binding on the Parties.