

3 → NAVIGATION DATA MESSAGE EXCHANGE FRAMEWORK

3.1 → OVERVIEW

This section describes the elements, characteristics, and major groupings of navigation data message exchanges.

3.2 → NAVIGATION DATA AND NAVIGATION DATA MESSAGES

3.2.1 → GENERAL

Figure 3-1 describes the roles of navigation data versus navigation data messages.

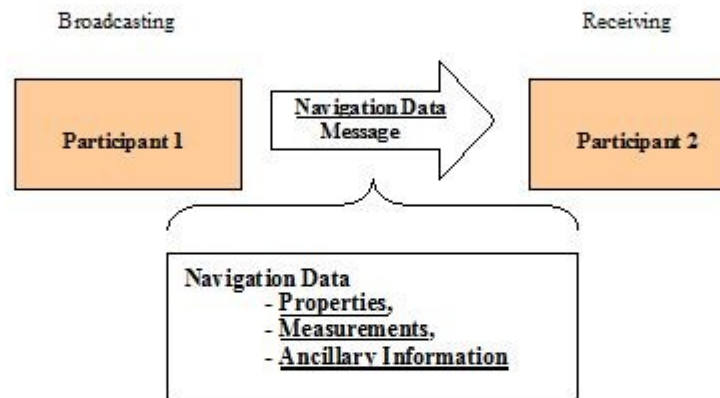


Figure 3-1: Navigation Data Message Exchange Definitions

Ideally, every navigation data message exchange will be covered by a CCSDS Recommended Standard related to flight dynamics. However, the completed CCSDS Recommended Standards cannot presently cover the entire range of exchanges. It should also be noted that spacecraft telemetry downlinked to the ground that contains navigation data is treated using CCSDS standards that are not in the flight dynamics domain. Section 4 introduces the current and proposed Recommended Standards for the exchange of navigation data. Agencies can benefit by utilizing these formats at the present time. The following are the current exchange scenarios within the scope of CCSDS.

- **Ground-to-ground** exchanges are defined as the set of exchanges between two non-spacecraft participants.
- **Ground-to-flight** and **flight-to-ground** exchanges are defined as the set of exchanges between a spacecraft participant and a non-spacecraft participant.
- **Flight-to-flight** exchanges are defined as the set of exchanges between two spacecraft participants.