A typical navigational receiver uses short-term polynomials for propagation of GNSS ephemerides. If the polynomials are not received for several days, the search for satellites can take the essential time. A suggestion is to exchange the current polynomials with new ones which can provide the necessary accuracy of satellite ephemerides over long-terms intervals, up to several weeks. The new polynomials can be generated by an analytical theory of satellite motion. We present our results in development of such a theory.