

## SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM (B2)

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Author: Mr. Ling Chen  
Beihang University, CanadaLIABILITY FOR SATELLITE NAVIGATION PROVIDERS: FROM AN AMERICAN AND CHINESE  
PERSPECTIVE**Abstract**

Satellite navigation brings significant social and economic benefits to us while its potential danger drives people into fears. Its failure will result in the derogation of signal quality and disturbing user's access to accurate positioning, navigation and timing data, thus affecting the continuity, accuracy, integrity and reliability of the service. Such a failure will no doubt lead to disasters, particularly in civil aviation and emergency services. This paper will focus on how the legal approach can deal with liability for damage caused by satellite navigation providers.

The first part introduces what satellite navigation is and "damage" in the GNSS-related cases, as well as its causation. Next, the attention will be paid to some preliminary debates about the liability issue: How is the relationship between providers and users? Is the Liability Convention applicable? Is there a need for a GNSS Liability Convention? The basic GNSS signals providers like the U.S. (GPS), Russia (GLONASS), China (BeiDou) and the E.U. (Galileo) have a direct and terminal contact with users and thus they bear the primary liability. Although they oppose the application of the Liability Convention, their position can't decide the interpretation of it. Besides, it is not necessary to draft a GNSS Liability Convention.

So far, there has never been a GNSS-related accident, we can turn to the liability of certain similar signal providers for help. In practice, their liability falls within domestic laws, which enables a user to bring a suit through domestic laws of signal providers or seek to the assistance of *lex loci delicti*. Not only does the United States own the most widely used GNSS system, but also it has a complete legal protection for the liability issue. 10 U.S.C. § 2281, 51 U.S.C. § 50112 and 49 U.S.C. § 301 set basic requirements for management and coordination of GPS. Also, the existing liability frameworks will be explored and it mainly relates to potential claimants and defendants, including the discussion of state immunity and waiver of immunity, scope of compensable damage, basis of liability and claims channels.

As to China, legislation specified in BeiDou is still in its infancy while China's Space Activities (White Paper) does mention it. Furthermore, legal proposals will be presented, such as borrowing ideas from others, responding flexibly to relevant international space laws, seeking to the basis under current laws, exploring into liability of BeiDou provider and attempting to establish compulsory insurance for BeiDou.