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AN ECONOMIC ANALYSIS OF THE LEGAL LIABILITIES OF GNSS

Abstract

The GNSS (Global Navigation Satellite System) technology is widely used today and many private actors as well as national actors are emerging. While national actors, such as the United States in case of the GPS, are generally exempted from both tort and contractual liability, private actors, such as Galileo in EU and QZSS in Japan, are generally not immune to liability. In order to facilitate private GNSS businesses, there is an international debate whether it is necessary to set up a new treaty on liability of GNSS managers. This paper tries to provide an economic analysis of legal liability of various parties from the viewpoint of social efficiency (optimal deterrence). While the international debate focuses on strict liability of GNSS managers, the paper argues against the idea. It is well known in the law and economics literature that strict liability scheme is desirable in unilateral care cases, while negligent liability scheme is desirable in bilateral care cases. Since most of the cases where GNSS raises liability issues involves bilateral care in the sense that not only GNSS managers but also GNSS-receiver makers and consumers need to engage in precautionary behavior in order to deter GNSS-caused accidents, it is socially optimal to adopt negligent-based liability scheme in general. Strict liability scheme would cause insufficient precaution on the part of GNSS-receiver makers and consumers and result in more and more GNSS-caused accidents. In contrast, negligent liability scheme would provoke effective precautionary behavior of GNSS-receiver makers and consumers as well as GNSS managers and deter GNSS-caused accidents efficiently.