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TOWARDS EFFICIENT INTEGRATION OF ROCKET LAUNCHES AND RE-ENTRY OPERATIONS  
IN EUROPEAN AIRSPACE: DEVELOPMENT AND TESTING OF A LAUNCH COORDINATION  
CENTER

**Abstract**

In Europe, the integration of rocket launches and re-entry operations into the air traffic management framework poses unique challenges. This paper presents the development and testing of an operational concept and accompanying software tools aimed at facilitating the coordination and monitoring of such activities. Initiated by the German Aerospace Center (DLR) through the Spacetracks project, the Launch Coordination Center has been developed to coordinate planning and execution between space companies, air traffic control facilities and additional stakeholders. The paper elucidates the current status of development efforts, focusing on the adaptation and preparation of software solutions for upcoming launch events. Through planned and implemented deployments, the paper showcases the potential and experience gained thus far, underscoring the system's efficacy in complex operational environments. Furthermore, it outlines future plans to leverage these insights for European air traffic network management applications. This work not only addresses immediate operational needs but also lays the foundation for efficient integration within the broader airspace management framework, offering insights into further development avenues and opportunities for seamless operational integration.