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DEMOCRATIZING INTEGRATED APPLICATIONS: BRIDGING THE GAP FOR UNIVERSAL ACCESS

Abstract

Integrated applications, such as disaster management, precision agriculture, urban planning, and other location-based services, utilize various space assets, including GNSS, remote sensing, and communication. As the space upstream economy continues to proliferate and mature, the potential for widespread usage of such integrated applications is becoming increasingly evident. However, their adoption rate remains well below the industry's expectations.

This lecture explores the concept of democratizing integrated applications, with a focus on making them accessible to a wider audience, including small and medium enterprises (SMEs), educational institutions, and individuals who are not tech-savvy. In order to get insights to this process, we will examine the typical lifecycle of integrated applications, from application definition and market segmentation to the data flow lifecycle: data collection, analysis, insight generation, applicative results, and actionable notes.

Thereafter, we will explore various strategies for increasing usage and reducing entry barriers. These strategies include the development and promotion of low-code/no-code platforms, standardized APIs, and open-source development initiatives, simplifying both the opt-in process and day-to-day service usage. In addition, we will highlight the importance of measurement usage trends and patterns, which will help our community and ecosystem to realize the effectiveness of our processes.

Finally, the lecture will highlight the critical role of leading institutions, such as the IAC and the United Nations Office for Outer Space Affairs (UNOOSA), in establishing guidelines for integrated application democratization. We will propose a framework for a comprehensive policy approach to this issue, fostering a more inclusive and innovative ecosystem for space-based applications with the goal of exploiting their full potential for a broader audience.