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Feature Articles

Wireless Access Technology to Meet Diverse Needs from IoT/M2M to Broadband

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Regular Articles

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- ▶ Report on WTSA-16 (World Telecommunication Standardization Assembly 2016)

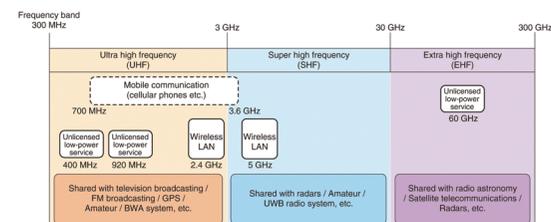
Feature Articles

Wireless Access Technology to Meet Diverse Needs from IoT/M2M to Broadband

Enhancing Wireless Access Technologies Using Multiple Frequency Bands to Enable the Widest Range of Internet of Things Applications

▼Abstract

In the future vision of society, wireless communications will play a more critical role in every aspects of our lives, because the advent of the Internet of Things (IoT) is expanding the application of wireless technology beyond human usage such as mobile or smartphones to *thing* usage such as industrial applications. It is therefore essential to develop efficient wireless technologies for the wide variety of frequency bands available—from the efficient use of conventional bands to the use of pioneering EHF (extremely high frequency) bands (millimeter wave band). This article introduces such development efforts in three areas: 5G (fifth-generation mobile communications systems), wireless LAN (local area network), and wireless access for IoT.



*The information here is based on "Principal Uses and Characteristics of Radio Wave" from the Ministry of Internal Affairs and Communications website.

Regular Articles

An Interpersonal Sentiment Quantification Method Applied to Work Relationship Prediction

▼Abstract

For a business to be successful, it is important for people in the business to consider how other people feel, that is, to consider *interpersonal sentiment*. Our research goal is to quantitatively predict the strength of interpersonal sentiment by analyzing a small amount of data on office employees, for example, their gender or age group, and data on events such as giving positive feedback on work done and sexual or power harassment without directly asking someone about their change in sentiment. In this article, we propose an interpersonal-sentiment-changing model for this quantification and propose two new analysis methods for developing prediction formulas. These methods can be used even if 90% of data is missing and in environments in which it is difficult to gather data in a comparatively short time. We also implement two visualization systems to predict how interpersonal sentiment changes for each event based on actual office data.

