Method of sharing IRS among carriers

Use machine learning to achieve optimal IRS sharing

Overview

Intelligent Reflecting Surface (IRS) is known as a means to improve wireless communication networks. IRS is a device with integrated metamaterial elements. By controlling the metamaterial elements, electromagnetic waves incident on the device can be reflected in any direction. As a result, it is possible to provide an effective communication environment even in places where radio waves are difficult to reach, such as behind a shield, and to expand the area where ultra-high-speed communication can be used.

However, if each carrier deploys its own IRS, problems such as landscape destruction due to an increase in communication facilities and wiring, an increase in resource and energy consumption, and redundancy of systems are expected. Therefore, there has been a need to establish a method for sharing the IRS among carriers.

The present invention relates to a method for sharing the IRS among multiple carriers using a machine learning algorithm.
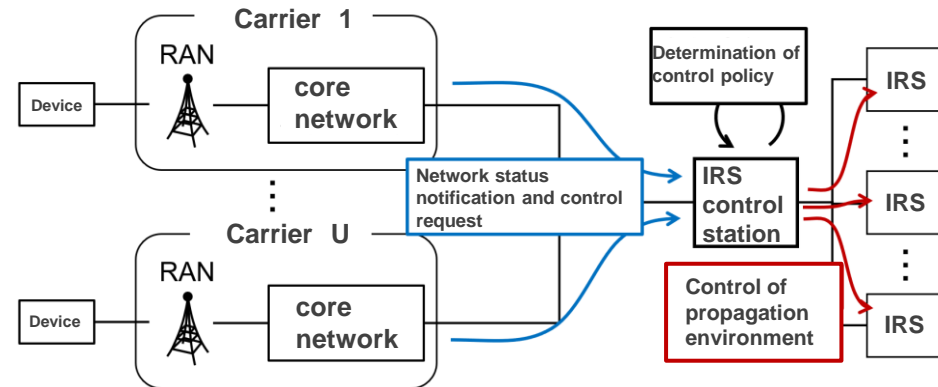
Product Application

- ☐ Communication infrastructure
- ☐ IRS control

IP Data

IP No.   : PCT/JP2023/020628
Inventor   : HASHIDA Hiroaki, KAWAMOTO Yuichi, KATO Nei
Admin No.   : T22-319

Features・Outstandings

Please contact us if you would like to know about undisclosed technology.

Related Works

[1] IEEE Transactions on Cognitive Communications and Networking, 2023, DOI: 10.1109/tccn.2023.3312386.

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