BaiCells

Japan Communications Inc.

Light Asset, Easy Operation Network assists JCI to achieve diverse business models

MVNO builds LTE on unlicensed spectrum

Listen-Before-Talk Technology

Low-Cost Network Construction

Easy Configuration & Operation

JCI is the first and largest MVNO in Japan. On May 24, 1996, Japan Communications Inc. (JCI) was established as the company to fulfill the objective of the Ministry of Communications and Internal Affairs (MIC) that next-generation Internet, driven by mobile communications, should form the foundation of Japan's future economic growth.

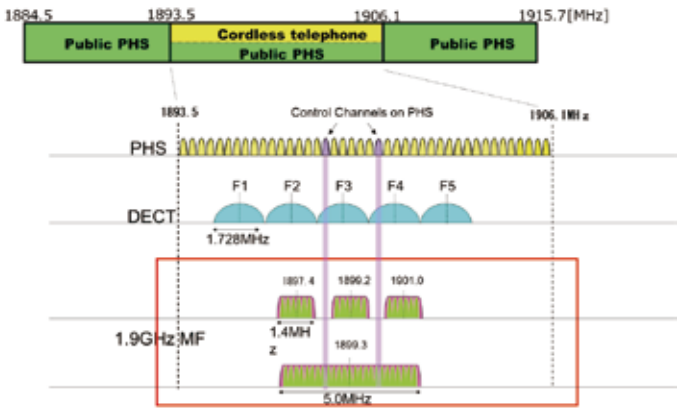
JCI's business model later became to be called MVNO. In March 2009, JCI achieved interconnection with NTT DoCoMo under MIC's policies to liberalize the mobile market. This interconnection meant that consumers could purchase mobile connectivity (SIMs) from sources other than the mobile carriers for the first time and led to the creation of the "kakuyasu SIM" market. Now it is time for companies from all industries, not just cellular companies, to embed mobile connectivity in to their devices.

JCI 日本通信株式会社 Japan Communications Inc.

Japanese Spectrum Policy

All over the world, the unlicensed spectrum mostly lies in around 2.4GHz and 5GHz, which is where WLAN exists. Different from this, in Japan, besides 2.4GHz and 5GHz, there is another spectrum band free of license, which lies from 1893.5Hz to 1906.1Hz.

For the moment, based on this spectrum band, Softbank is running PHS service. Meanwhile, enterprises in Japan could freely self-build internal network without telecom carriers on the 5MHz of this band.



Japanese Spectrum Distribution

Highlights:

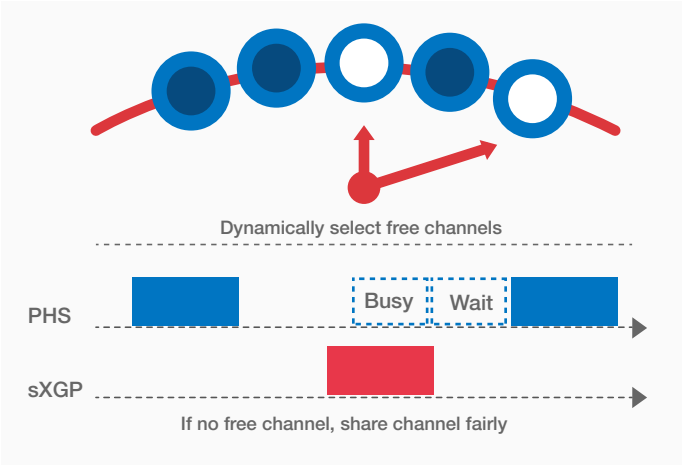
MVNO builds LTE on unlicensed spectrum

The specialty about the Japanese spectrum policy is that the unlicensed spectrum 1.9GHz is where most of others countries build TD-LTE. Aware of this fact, JCI intends to self-build LTE network on the 5MHz frequency band to provide mobile data services to public users. Previous to that, JCI interconnected with NTT DoCoMo networks to resell mobile data with attractive package. If the plan fulfilled, JCI would turn to a real Telecom Carrier in Japan.

Listen-Before-Talk Technology

The goal is ambitious, but there is still some difficulties on the way. The interference is one example. Right now the same frequency band is used by lots of enterprises and Softbank PHS. Without a good solution to address the problem, JCI ambitious goal is hardly fulfilled.

Baicells, as JCI strategic partner, has accumulated many years' experiences on wireless solution. LBT (Listen before Talk), one of Baicells' mature technologies could perfectly resolve the interference problem: before LTE using this piece of spectrum, make sure there is no other wireless signal on the same band.



How LBT works to reduce interference

Low-Cost Network Construction

JCI, as Japanese largest MVNO, has cooperated with NTT DoCoMo for years and knew well about mobile market. On their decision of transforming to a true telecom operator, the low-cost network construction solution is an essential prerequisite of profitability.

Baicells innovative OpenRAN architecture and Cloud based core network make it possible to build a reliable LTE network at a low cost. And that's why JCI chose Baicells as partner.

Easy Configuration & Operation

One of the concerns for most telecom carriers, is the high operation expense, among which operation employees' human cost account for the largest proportion. Telecommunication equipment's easy configuration and self-operation could solve an important realistic problem.

Baicells Small Cell support plug-in design: once the Ethernet is well plugged in, the equipment is connected. And Baicells OMS could realize long-distance operation and fast trouble shooting. Both of them would great decrease the operation cost for JCI.

JCI CXO Group visited Baicells

Future Evolution

JCI has a series strategies of diverse business models:

- Firstly integrate unlicensed LTE network and multi mobile carriers' networks based on JCI legacy platform and Baicells solution;

- Secondly, higher integrated secure and reliable telecommunication services to financial industry;

- in addition, the platform initially provided to MVNO operators, enterprise corporations, and small and mid-size businesses to enable IoT applications.

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