UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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ARRIS GROUP, INC.,
Petitioner,

ARUBA NETWORKS, INC.,
HEWLETT PACKARD ENTERPRISE COMPANY, and HP, INC.,
Petitioner,

v.

MOBILE TELECOMMUNICATIONS TECHNOLOGIES, LLC,
Patent Owner.

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Case IPR2016-00766 (Patent 5,659,891)
Case IPR2016-00768 (Patent 5,659,891)

————————

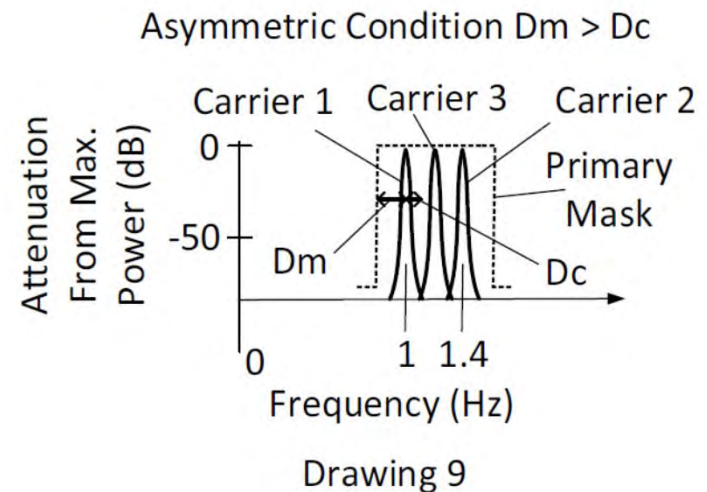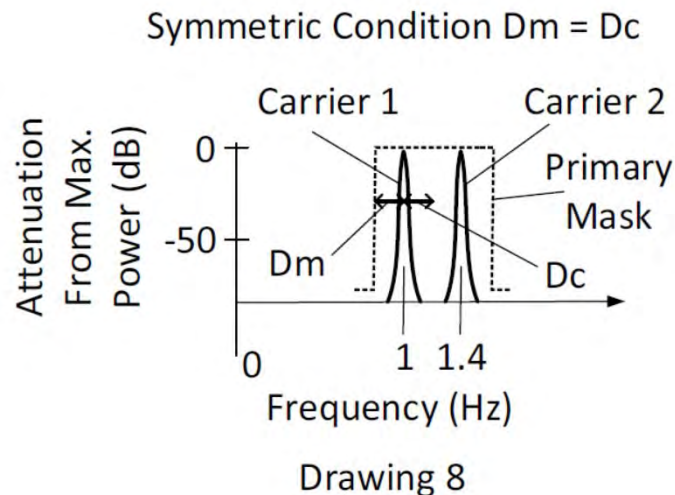**Patent Owner's Demonstrative Exhibits for Oral Hearing**

1   June 20, 2017

Arguments

- Petitioner's expert admits that Petrovic does not disclose a "band edge of the mask" at all: "it is not clear where [in Petrovic] the band edge of the mask is"

- Petrovic's subcarriers do not meet the asymmetric condition of claims 1, 3, and 5.

- Petrovic's subcarriers do not overlap as required by claims 2 and 4. The main difference between Patent Owner's arguments and Petitioner's arguments is:

  - Patent Owner's arguments are a consistent explanation, backed by evidence, of how and why the invention and claims were made

  - Petitioner's arguments, on the contrary, impermissibly use hindsight to make the parameters of the Petrovic fit the claims of the '891 Patent
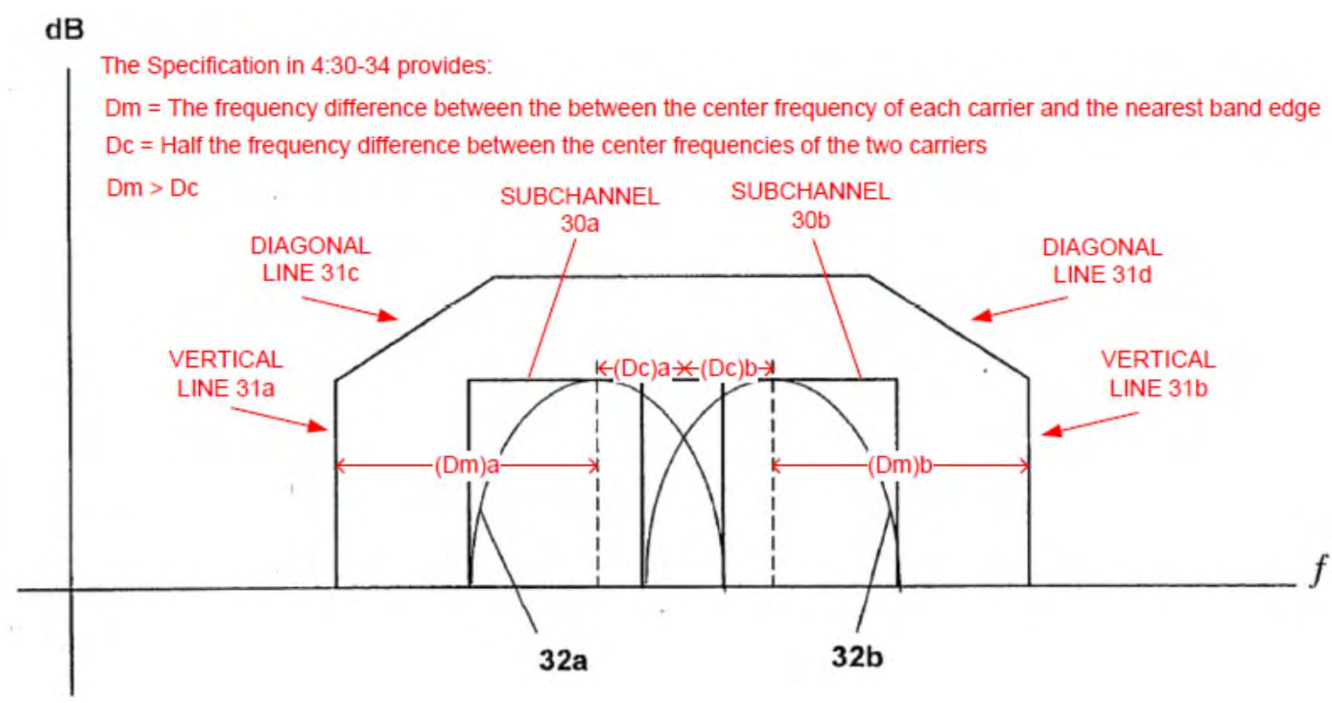
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Patent Owner's argument is a consistent story

- Patent Owner's expert, Dr. Kesan, shows how the purpose of the '891 Patent is to increase the message capacity of a channel. Ex. 2011 at 21.

- He then shows in great detail how (1) co-location of transmitters eliminates the near-far problem and allows transmitters to (2) overlap under the asymmetric condition to increase message capacity. *Id.* at 32 and 40.

Symmetric Condition Dm = Dc

Carrier 1   Carrier 2

Attenuation From Max. Power (dB)

Primary Mask

Dm   Dc

Frequency (Hz)

Drawing 8

Asymmetric Condition Dm > Dc

Carrier 1   Carrier 3   Carrier 2

Attenuation From Max. Power (dB)

Primary Mask

Dm   Dc

Frequency (Hz)

Drawing 9

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Asymmetric condition

- Claims 1, 3, and 5 include the asymmetric condition that the frequency difference between the center frequency of the outer most carrier and the band edge of the mask defining the channel (hereafter D_m) is more than half the frequency difference between each adjacent carrier (hereafter D_c), or Dm > Dc.

dB

The Specification in 4:30-34 provides:

Dm = The frequency difference between the between the center frequency of each carrier and the nearest band edge

Dc = Half the frequency difference between the center frequencies of the two carriers

Dm > Dc

DIAGONAL LINE 31c

SUBCHANNEL 30a

SUBCHANNEL 30b

DIAGONAL LINE 31d

VERTICAL LINE 31a

(Dc)a (Dc)b

VERTICAL LINE 31b

(Dm)a

(Dm)b

f

32a

32b

ANNOTATION A OF FIGURE 3B

FIGURE 3B

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Message capacity increased

- Decreasing the distance between the outer most carrier and the band edge of the mask necessarily decreases adjacent carrier spacing, per the asymmetric condition in the claims, and increases message capacity. Dr. Kakaes agrees: Ex. 2013 at 187:17-22.

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17        Q.    Decrease DM.
18        A.    Decrease DM.
19              That means that you move the outermost
20 carrier farther out.   That decreases DM.
21              That means that the spacing between the
22 subcarriers would have to become closer.
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