

TQ DELTA, LLC v. CISCO SYSTEMS, INC., Appeal No. 2018-1766 (Fed. Cir. November 22, 2019). Before Reyna, Hughes and Stoll. Appealed from PTAB.

Background:

TQ Delta filed suit against Cisco, alleging infringement of patents directed to high-speed internet transmission. The patents address a problem related to the peak-to-average power ratio (PAR) of signals that occurs when multiple bits are transmitted simultaneously across a series of narrow frequency bands known as "carriers." The PAR problem arises when the carriers are combined into a single signal for data transmission.

In particular, when many of the transmitted bits have the same value (i.e., 0 or 1) at substantially the same time, the combined signals result in problematic high amplitude waves and clipping events. In view of these problems, the invention reduces PAR by scrambling the phases of the carriers so that the carriers will not peak at the same time, even when many of the bits have the same value.

Cisco instituted inter partes review proceedings before the Board to challenge the validity of the patents. During the proceedings, the Board invalidated all of the claims of the challenged patents, finding that the claims were obvious over a combination of two references asserted by Cisco. The primary reference addresses a problem of high noise levels in each carrier by spreading the transmission of a single bit across several carriers at reduced power levels, and then "despreading" the signal at the receiving end. The secondary reference briefly mentions applying a phase scrambling sequence "to randomize the overhead channel symbols" that are sent with the transmitted data. Neither reference discusses PAR or clipping.

During the proceedings, the Board agreed with Cisco's expert witness testimony that one skilled in the art would have been motivated to combine the references so as to render obvious the claimed subject matter. According to the expert, one skilled in the art would have recognized the use of phase scrambling taught by the secondary reference as a solution to reduce the PAR that could occur in the primary reference. Based on these findings, the Board invalidated the challenged patents. TQ Delta appealed.

Issue/Holding:

Did the Board err in invalidating the claims of the challenged patents as obvious? Yes, reversed.

Discussion:

The Federal Circuit found that there was insufficient evidence to combine the references because the Board appeared to rely almost exclusively on the expert testimony, which merely provided unsupported and conclusory statements regarding the motivation to use the randomization of the secondary reference to reduce PAR in the primary reference. In view of this failure to provide "any meaningful explanation for why one of ordinary skill in the art would be motivated to combine these references at the time of this invention," the Federal Circuit held that the Board erred in invalidating the claims of the challenged patents as being obvious.