



is one in which every participant is connected to the same number of participants, but fewer than all the other participants. Activision argued that claim 1 of the '147 patent recites a method of disconnecting a first computer from a second computer in an incomplete m-regular network. Acceleration Bay argued that the claim recites a method of disconnecting a first computer from a second computer in an m-regular network, regardless of whether the network is incomplete. I agreed with Acceleration Bay and construed the claim as covering disconnection from any m-regular network, whether complete or incomplete. I precluded Activision from arguing to the contrary in its closing argument to the jury.

### **1. Plain Language**

Claim 1 of the '147 patent is not expressly limited to incomplete m-regular networks. It requires only that the network be m-regular. “It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc). On its face, the claim therefore includes disconnection from both complete and incomplete m-regular networks, which is consistent with Acceleration Bay’s position and contrary to Activision’s.

Activision is correct that claim 1 of the '147 patent covers incomplete m-regular networks. Indeed, the embodiments described in the patents prefer an incomplete m-regular network to reduce the number of point-to-point connections. *See* '147 patent at 1:48-51 (explaining that connecting all participants using point-to-point connections “does not scale well as the number of participants grows”). By using an incomplete m-regular network, it is possible to reduce the total number of connections without significantly compromising the “distance,” in terms of nodes, that a message would need to be transmitted to reach the farthest computer on the network. *See e.g.*, '147 patent at Fig. 1 (showing a graph of 9 participants, each connected to four of their peers). But

to say that claim 1 covers incomplete networks does not mean that it does not cover complete networks.

The specific language at issue in claim 1 is a “broadcast channel forming an m-regular graph,” which Activision argues must exclude a broadcast channel forming a complete m-regular graph. However, the specification includes at least one example that is inconsistent with Activision’s position. As the specification explains, “Fig. 3A illustrates [a] broadcast channel.” ’147 patent at 5:65–67. The broadcast channel depicted in Figure 3A is both complete and m-regular. Every participant in the figure is connected to every other participant. In other words, Figure 3A shows exactly the broadcast channel Activision would read out of the claim’s scope. Although Figure 3 relates to connecting to a broadcast channel, whereas claim 1 relates to disconnecting, the figure is strong evidence that an m-regular broadcast channel of the sort that is the subject of the ’147 patent need not be incomplete.

Activision makes three additional arguments in support of its restrictive construction of the claim, all of which are unpersuasive. First, Activision argues that the claim’s “connection port search message,” which is sent to locate a computer with fewer than m neighbors, implies that the network must be incomplete, because no computer can have fewer than m neighbors if every computer is connected to every other computer. That argument, however, does not justify reading an “incomplete” limitation into the claim, because the connection port search message can still be sent to a complete network. In such a case, the system would report that there are no computers with fewer than m neighbors.

Second, Activision argues that the claim requires a message to be sent when one computer leaves the network “in order to maintain an m-regular graph,” a step that would be unnecessary if

the network were complete to begin with. But the fact that a claimed step may be unnecessary under certain circumstances does not require that the claim be read to exclude that step.

Third, Activision argues that the claim requires that when one computer disconnects from the network by disconnecting from a second computer, the second computer must take steps to find a third computer to which it can connect in order to maintain m regularity. Activision argues that step would not occur if every computer were already connected to every other computer in the network. As with the previous arguments, however, it may not be necessary for the second computer to search for a third computer to connect to if the network is already complete, but the step is not prohibited.

It is well settled that courts must first “look to the words of the claims themselves . . . to define the scope of the patented invention.” *Aventis Pharms. Inc. v. Amino Chemicals Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013). Here, the plain language of the claim is unambiguous and clearly covers any m-regular network—not just incomplete ones. For that reason, I agree with Acceleration Bay’s construction.

## **2. Estoppel**

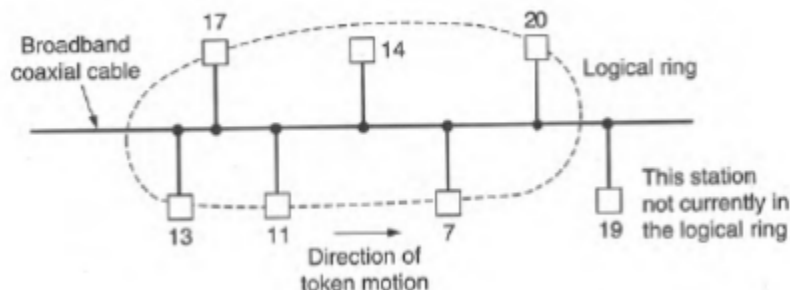
Activision further argued that Acceleration Bay is estopped from contending that claim 1 of the ’147 patent does not require that the network be incomplete. Activision bases its argument on representations Acceleration Bay made in the *inter partes* review proceedings concerning the ’147 patent. Specifically, Activision cited various statements from Acceleration Bay’s Preliminary Response opposing institution.<sup>2</sup>

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<sup>2</sup> Most of the statements cited by Activision relate to what the ’147 patent “describes,” namely “a network where each . . . participant is connected to some—but not all—neighboring participants,” i.e., an incomplete network. Patent Owner’s Preliminary Response, IPR 2016-00747 at 4–6. Those statements, however, merely describe the general background of the invention and do not suggest that the scope of claim 1 is limited to such a network.

The most critical statement was made in an argument in which Acceleration Bay attempted to distinguish a prior art reference called Rufino. Acceleration Bay argued that Rufino “does not address receiving disconnect messages in the context of maintaining an m-regular non-complete topology, as required by claim 1.” Patent Owner’s Preliminary Response, IPR 2016-00747 at 25. Activision argues that the statement constitutes a clear and unequivocal disclaimer of complete networks. Although Acceleration Bay’s statement appears straightforward, context makes clear that it was not the sort of “disavowal of claim scope” that is necessary to trigger an estoppel. *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1363 (Fed. Cir. 2017).

Rufino is a journal article describing “a token-ring based local area network.” Decision Granting Institution, IPR 2016-00747 at 12; *see also* Final Written Decision, IPR 2016-00747 at 13 (referring to Rufino as describing a “token bus based . . . network”). A token-ring or token bus network is one in which every participant is connected to two other participants, and data is relayed between participants like a game of telephone. A depiction of a token ring is shown below:



Final Written Decision, IPR 2016-00747 at 17. Because each participant in a token ring is connected to only two other participants, Rufino clearly discloses an incomplete network, something Acceleration Bay did not dispute. In fact, neither the Decision Granting Institution nor the Final Written Decision makes any mention of complete or incomplete networks. That distinction was simply not at issue in the proceedings in which the alleged disclaimer was made.

What was at issue, and what the contested statement was intended to distinguish, was whether Rufino taught a “disconnect message” within the meaning of the claims. I therefore interpret Acceleration Bay’s statement as meaning that Rufino “does not address receiving disconnect messages . . . as required by claim 1.” The appositive from the original statement (“in the context of maintaining an m-regular non-complete topology”) simply parrots the language of the petition, which emphasizes the significance of “maintaining an m-regular non-complete topology.” Petition, IPR 2016-00747 at 10.

For the foregoing reasons, the statements made by Acceleration Bay in the *inter partes* review proceedings do not amount to the sort of “clear and unmistakable” disclaimer necessary for prosecution history estoppel to attach. *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1326 (Fed. Cir. 2003); *Aylus*, 856 F.3d 1353 (considering statements made by a patent owner during an *inter partes* review proceeding for purposes of prosecution disclaimer). There is therefore no disclaimer that would justify reading into the claim a requirement that the network at issue in claim 1 must be incomplete.

### **3. Take-Two Proceedings**

Activision also argued at trial that the ruling in *Acceleration Bay LLC v. Take-Two Interactive Software, Inc.* (“*Take-Two*”), 612 F. Supp. 3d 408, 413 (D. Del. 2020), is binding on Acceleration Bay. In the summary judgment order in that case, Judge Andrews wrote that the claims of the ’147 patent apply only to an incomplete m-regular network. *Id.* at 413 (“While the ’069 and ’147 patent claims describe methods, they are also limited to ‘incomplete’ and ‘m-regular’ networks.”). That statement, however, was made in the general background section of the order, in which Judge Andrews was describing the nature of the claims of four different patents, the other three of which called for an “incomplete” or “non-complete” m-regular network. Although the

quoted statement was made in the course of a discussion of all claims of the '147 patent and all claims of U.S. Patent No. 6,910,069 (the "'069 patent"), Judge Andrews' subsequent discussion suggests that he did not intend to read a requirement that the network be "incomplete" into claim 1 of the '147 patent.

In the same paragraph, Judge Andrews explained that "although the asserted claims of the '069 patent do not explicitly require an 'm-regular' or 'incomplete' network," he construed the claim "to include both limitations." *Take-Two*, 612 F. Supp. 3d at 413 n.1. In adopting that construction, Judge Andrews credited Acceleration Bay's "clear and unmistakable disclaimer" of complete m-regular networks in an *inter partes* review of the '069 patent. Civil Action No. 16-453-RGA (D. Del.), Dkt. No. 345 at 12 (claim construction order).<sup>3</sup>

Unlike his treatment of the '069 patent, Judge Andrews made no reference to the fact that claim 1 of the '147 patent does not expressly require that the network be "incomplete." That omission suggests that Judge Andrews did not intend to import an additional limitation into that claim. Additionally, the question whether the '147 patent requires an "incomplete" network was inconsequential to the rest of Judge Andrews' order. As such, Judge Andrews' characterization of the '147 patent as requiring an "incomplete" network amounts to nothing more than a general description of a group of patents. It does not constitute a formal claim construction.

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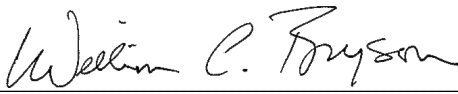
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<sup>3</sup> Acceleration Bay had argued in an *inter partes* review proceedings that the '069 patent "is directed to 'incomplete' networks in which each participant is connected to fewer than all of the other participants in the network." Patent Owner's Preliminary Response, IPR 2017-01600 at 13–14. It specifically did so in the context of claim construction, and that construction proved to be an important feature in distinguishing the '069 patent from the prior art. Judge Andrews considered those arguments to constitute a binding disclaimer, but he considered other statements made "in the background section of the Patent Owner Preliminary Response" not to disclaim anything. Civil Action No. 16-453-RGA (D. Del.), Dkt. No. 345 at 13.

In sum, none of Activision's arguments overcome the plain language of the claim. For the foregoing reasons, I construed claim 1 as applying to any m-regular graph, regardless of its completeness, and I therefore precluded Activision from arguing a contrary construction to the jury.

IT IS SO ORDERED.

SIGNED this 8th day of May, 2024.

  
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WILLIAM C. BRYSON  
UNITED STATES CIRCUIT JUDGE