

# EXHIBIT C

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

NETWORK-1 TECHNOLOGIES, INC.,

Plaintiff,

vs.

GOOGLE LLC AND YOUTUBE, LLC,

Defendants.

Case No. 1:14-CV-02396-PGG-SN

Case No. 1:14-CV-09558-PGG-SN

**Expert Rebuttal Report of Dr. Gregory K. Leonard**

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representing ██████ rightsholders, and maintained a reference database with over ██████  
██████ active reference files.<sup>160</sup>

### **C. Google's Maximum Willingness to Pay**

74. The economic analysis of a hypothetical negotiation involves determining the maximum royalty that Google would have been willing to pay for the right to use the Patents-in-Suit. This maximum royalty is driven by the difference between the expected profitability at the time of the hypothetical negotiation from using the patented technology (assuming Google takes a license to the Patents-in-Suit) and the expected profitability that could be achieved by using a non-infringing alternative. In other words, Google would be unwilling to pay more for the right to utilize the Patents-in-Suit than the incremental profit that it would expect to lose if it was forced to develop and switch to a non-infringing system. Google's relative bargaining position is therefore determined by its next-best, non-infringing alternative. If Google had an acceptable and effective non-infringing alternative, then its relative bargaining position would have been strong, and it would not have been willing to pay more than the full economic cost of avoiding infringement of the Patents-in-Suit by implementing this non-infringing alternative. Conversely, Network-1 and/or Dr. Cox would have accepted a lower royalty recognizing that their relative bargaining position was weak due to the available non-infringing alternatives.

#### **1. Next-Best, Non-Infringing Alternative: Moving the Match System to Data Centers Outside of the United States**

##### **a. Google's Video Platform and Content ID Operate Globally**

75. I now consider more specifically one of the non-infringing alternatives that Google could have implemented at the time of the hypothetical negotiations: moving the Match System component of Content ID to data centers outside of the U.S. Before discussing the specifics of implementing this alternative, it is important to note that Google's YouTube operations span the globe, with a multitude of actions already taking place across various countries and regions: users may generate their content in one country, upload their content

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<sup>160</sup> "YouTube Content ID," YouTube, February 3, 2017 (GOOG-NETWORK-00766943 at 951).

to a server in their home country or another country, after which that content may be distributed and viewed by users across the globe, generating ad revenues from dozens of countries.

76. The Content ID system relies, and has relied since the time of the hypothetical negotiation, upon a global infrastructure. For example:

- Users from around the world upload videos to the YouTube platform.<sup>161</sup>
- Uploaded videos are processed and transcoded in a number of Google's data centers around the world.<sup>162</sup>
- Once a video is transcoded, [REDACTED]  
[REDACTED]<sup>163</sup>
- [REDACTED] data centers in the U.S. and Europe that house the Match System.<sup>164</sup>
- [REDACTED]  
[REDACTED]<sup>165</sup>

<sup>161</sup> "From PewDiePie to Shane Dawson, these are the 26 most popular YouTube stars in the world," Business Insider, February 7, 2020, <https://www.businessinsider.com/most-popular-youtubers-with-most-subscribers-2018-2#17-rezendeevil-261-million-subscribers-10>.

<sup>162</sup> Interview with Matthias Konrad & Oleg Ryjkov, February 10, 2020.

<sup>163</sup> Konrad Deposition, pp. 52:14-53:2. ("Q. Okay. And when a – so, can you help me understand how, for a given upload, the work of the match system might be divided across data centers? Or is it all processed by a single data center for one upload? A. For the – so, the matching is a – is – has many stages. [REDACTED]

[REDACTED] So, in that way, yes, it can be spanning two data centers."); Interview with Matthias Konrad & Oleg Ryjkov, February 10, 2020.

<sup>164</sup> Erb Deposition, p. 148:8-22. ("Q. And has that data – well, has the location where the MatchSystem servers or the match server runs, has that changed over time at all? A. Yes, we've migrated from data center to data center, but it's changed in detail. Q. Has it generally been consistent with what you described, [REDACTED]

[REDACTED] Q. And that's been true for the time that you've been working on the ContentID system. A. Yes."); Interview with Matthias Konrad & Oleg Ryjkov, February 10, 2020.

<sup>165</sup> Interview with Matthias Konrad & Oleg Ryjkov, February 10, 2020.

- Content owners determine what happens with a claimed video.
- Claimed videos are watched by YouTube viewers across the globe. Advertising revenue is generated by viewers spanning dozens of countries.<sup>166</sup>

77. This context is relevant for evaluating potential non-infringing alternatives to the Patents-in-Suit.

**b. Steps for Moving the Match System to Data Centers Outside of the U.S.**

78. As discussed above, as relevant here, the Content ID system involves three general steps: fingerprinting, matching, and claiming. I understand that, because the Patents-in-Suit each contain method claims, not system claims, infringement would occur only when all steps in the claimed methods occur in the United States. I understand that, throughout the relevant time period, the relevant steps have occurred in different geographies—videos uploaded by users are processed, [REDACTED] in Google’s data centers around the world, whereas the Match System has been hosted only in data centers in the United States and in Europe.<sup>167</sup> [REDACTED] and those servers are not necessarily located in the same data centers as the Match System.<sup>168</sup> At no point during the relevant time period has there been any technical or other requirement that the three stages need to occur in the same location (or in the United States) and, indeed, they often do not.<sup>169</sup>

79. Thus, at the time of the hypothetical negotiation, one non-infringing alternative available to Google was to move one of the steps of the claimed methods outside of the U.S. Given the international nature of Google operations discussed above, such an alternative would

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<sup>166</sup> “YouTube monetized markets,” YouTube Help, [https://support.google.com/youtube/answer/1342206?hl=en&ref\\_topic=9257990](https://support.google.com/youtube/answer/1342206?hl=en&ref_topic=9257990). See also, “Which Countries Watch the Most YouTube,” WorldAtlas, <https://www.worldatlas.com/articles/which-countries-watch-the-most-youtube.html>.

<sup>167</sup> Interview with Matthias Konrad & Oleg Ryjkov, February 10, 2020.

<sup>168</sup> Interview with Matthias Konrad & Oleg Ryjkov, February 10, 2020.

<sup>169</sup> See “Response to Interrogatory No. 22,” Defendants’ Responses and Objections to Plaintiff’s Fourth Set of Interrogatories (Nos. 22-25), pp. 2-3; see also Bhattacharjee Report, Part XVI.

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