UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Google LLC,
Petitioner

v.

Kove IO, Inc.,
Patent Owner

Case No. IPR2024-01019
Patent No. 7,814,170

DECLARATION OF NANCY E. ADAMS Ed.D.

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I. INTRODUCTION

I, Nancy E. Adams Ed.D., do hereby declare as follows:

1. I have been retained as an independent expert witness on behalf of Patent Owner for proceedings before the United States Patent and Trademark Office ("PTO") regarding the public availability of a document (Exhibit 1007, discussed further below) in relation to the above-named *Inter Partes* Review ("IPR").

2. I am being compensated for my work in this matter at my customary hourly rate, which is $250/hour. I am also reimbursed for any reasonable expenses associated with my work on this matter. My compensation is not contingent on the results of my study, the substance of my opinions, or the outcome of this matter.

3. I understand that this Declaration accompanies a Preliminary Patent Owner Response ("POPR").

A. Qualifications and Professional Experience

4. My complete qualifications and professional experience are described in my curriculum vitae (**Exhibit 2003**). The following is a brief summary of my relevant qualifications and professional experience.

5. I am the Librarian for Scholarly Communication and Education at Harrell Health Sciences Library, a Penn State University Library. I have held this

position since July of 2024. Prior to that, I held the position of Assistant Dean of Foundational Sciences at Penn State College of Medicine and Librarian for Education and Instruction at Harrell Health Sciences Library, a combined position that I held between July of 2017 to July of 2024. Prior to that, I held the position of Associate Director of the Harrell Health Sciences Library, which began in 2010. Prior to that, I held numerous Librarian positions at the University level, such as Harrisburg University of Science and Technology, The University of Maine, and Wayne State University. I have accumulated a total of 27 years of experience working in academic library and medical library settings.

6. I hold an Ed.D. in Adult Education from Pennsylvania State University and a Masters in Library and Information Science from Wayne State University.

7. I am an expert on library cataloging, classification, and searching. I have published contributed chapters to editions on this subject, *Curriculum Mapping: A Match Made for Librarian Skill* (2020) and *Making it better: library and student services collaboration at a new university* (2012). I have taught workshops on literature searching to a myriad of undergraduate students, graduate students, and advanced-degree professionals for decades. I have given presentations, such as "Searching PubMed like an Expert: The Evolution, a PubMed Searching Discussion Forum." I have served as the search specialist on a systematic

review team in which my role was to formulate, execute, and document an exhaustive search of the literature answering a specific research question.

8. I am familiar with metadata schematic design and implementation. As a librarian, I routinely use the metadata associated with publications to answer reference questions or track down items that researchers rely on for their work. I have used online cataloging systems to create new catalog records for materials archived by libraries.

9. I am personally familiar with many online catalogs, databases, and search engines, including all of the particular catalogs, databases, and search engines that I reviewed and relied upon in forming my opinions herein.

B. Scope of This Declaration

10. I have been asked to review Dr. Sylvia D. Hall-Ellis's Declaration (**Exhibit 1020**) regarding the of public availability of a document, Vingralek et al., "Distributed file organization with scalable cost/performance" ("Vingralek"), which document was filed as **Exhibit 1007** in the above-named IPR, and to provide my opinions regarding Dr. Hall-Ellis's methodology and conclusions based upon that review.

C. Evidence Considered in Forming My Opinions

11. In preparing this Declaration, I have reviewed the documents I reference herein, and each of these is a type of material that experts in my field of

library cataloging and reference classification would reasonably rely upon when forming their opinions.

12. I have been informed and understand that a printed publication qualifies as publicly available or accessible as of the date it was disseminated or otherwise made available such that a person interested in the field of art could locate it through ordinary diligence. I have been and informed and understand that a date of publication alone is insufficient to qualify a printed publication as publicly available.

13. I have also been informed and understand that a printed publication may be deemed publicly available if it is cataloged and indexed by a library such that a person interested in the field of art could locate it through reasonable diligence.

II. PUBLIC AVAILABILITY OF VINGRALEK

14. I have reviewed Dr. Hall-Ellis's Declaration (submitted as **Exhibit 1020**) and the copy of Vingralek (submitted as **Exhibit 1007**). According to Dr. Hall-Ellis, "Exhibit 1007 is a copy of the journal article titled 'Distributed File Organization with Scalable Cost/Performance' by Radek Vingralek, Yuri Breitbart, Gerhard Weikum, and Raj Yavatkar (hereafter 'Vingralek')." Ex. 1020, ¶46. Dr. Hall-Ellis further alleges that "[t]he Vingralek article was published on pages 3-26 in Volume 207 dated December 1993 of the open access *Jahresbericht* [Annual

Report] issue of the journal *Eidgenössische Technische Hochschule* [Federal Technical University] Zürich (ETH Zürich) and was found in the digital repository Zeitschriftendatenbank [German Union Catalog of Serials] (ZDB) (Berlin, Germany)." Ex. 1020, ¶46. I cannot corroborate Dr. Hall-Ellis's findings that Vingralek (**Exhibit 1007**) was published in December 1993 based on the evidence submitted by Dr. Hall-Ellis and Petitioner because Dr. Hall-Ellis's findings are incorrect and inconclusive, and the evidence demonstrates that Vingralek was not actually published in the *Jahresbericht* [Annual Report]. As I explain further below, contrary to Dr. Hall-Ellis's assertions, my investigation leads me to conclude that Vingralek (**Exhibit 1007**) was not published in "Volume 207 dated December 1993 of the open access *Jahresbericht* [Annual Report] issue of the journal *Eidgenössische Technische Hochschule* [Federal Technical University] Zürich (ETH Zürich)."

15. As an initial matter, I cannot find any information indicating that Vingralek was publicly available in December 1993 from the face of the copy of Vingralek submitted by Petitioner. The Vingralek document (**Exhibit 1007**) appears to be a scanned copy of a printed hardcopy. Vingralek, on page 2,[1] contains what

[1] The pages that I reference here are those found on the lower left corner of Exhibit 1007 (*e.g.*, "Page 2 of 27").

appears to be an inked stamp of the ETH Zurich library in the lower right quadrant of the document page. Ex. 1007, 2. I have excerpted page 2 from Exhibit 1007 below and added a red box around the stamp:

ETH

Eidgenössische
Technische Hochschule
Zürich

Departement Informatik
Institut für
Informationssysteme

Radek Vingralek
Yuri Breitbart
Gerhard Weikum
Raj Yavatkar

Distributed File Organization with Scalable Cost/Performance

Eidg. Techn. Hochschule Zürich
Informatikbibliothek
ETH-Zentrum
CH-8092 Zürich

December 1993

207

Ex. 1007, 2. The stamp does not indicate a date.

16. The same stamp also appears at the bottom of the final page of Vingralek (page 27 of the Exhibit). Ex. 1007, 27. I have excerpted this below:

Eidg. Techn. Hochschule Zürich
Informatikbibliothek
ETH-Zentrum
CH-8092 Zürich

Ex. 1007, 27. This stamp similarly does not include any date information.

17. I do not see the words *Jahresbericht* or *Annual Report* written on the title page of Vingralek or on any other pages. Page 1 of the Vingralek document (**Exhibit 1007**) states that Vingralek was originally published in: "ETH, Eidgenössische Technische Hochschule Zürich, Departement Informatik, Institut für Informationssysteme 207." Ex. 1007, 1. From the information present in Exhibit 1007, I cannot see any evidence to support Dr. Hall-Ellis's assertion that Vingralek was published in the *Jahresbericht* (Annual Report) of the ETH Zurich.

18. I note that "Attachment 1A" to Dr. Hall-Ellis's declaration (**Exhibit 1020**) identifies that the *Jahresbericht* she relies upon was printed in the German language. Ex. 1020, 91 (Attachment 1A) ("Language[:] German"). I also note that "Attachment 1C" to Dr. Hall-Ellis's declaration provides a "Language Code" of German and that "Attachment 1D" to Dr. Hall-Ellis's declaration (a WorldCat entry for *Jahresbericht*) states that it is a "Journal, Magazine, German…" Ex. 1020, 99, 103. These entries are consistent with a librarian's understanding that the languages identified in each "Attachment" indicate the language in which the journal and its contents were published (here, that the *Jahresbericht* and its contents are in German). The German-language indication is in contrast to Vingralek (**Exhibit 1007**), which is written in English and bears no indication that it was translated from another language.

19. Despite the discrepancy between the language of the *Jahresbericht* (German) and Vingralek (English)—which alone indicates that Vingralek (**Exhibit 1007**) was not part of a German-language *Jahresbericht*—I nonetheless investigated Dr. Hall-Ellis's claim that Vingralek (**Exhibit 1007**) was published "on pages 3-26 in Volume 207 dated December 1993 of the open access *Jahresbericht* [Annual Report] issue of the journal *Eidgenössische Technische Hochschule* [Federal Technical University] Zürich (ETH Zürich)," as claimed in paragraph 46 of Dr. Hall-Ellis's declaration. To do this, I searched for a copy of the 1993 Annual Report of ETH Zurich in the ETH Zurich Repository for Publications and Research Data at <https://www.research-collection.ethz.ch>, to which Dr. Hall-Ellis refers in footnotes 19 and 20 in paragraphs 47 and 48 of her Declaration (**Exhibit 1020**). I searched the database for *Jahresbericht ETH Zurich* and found that the Annual Report is cataloged in the database with an entry for each year. I began by entering "*Jahresbericht ETH Zurich*" into the search query on the URL, <https://www.research-collection.ethz.ch>. The search returned 51 total results. I then used the "refine by" option to narrow the date range from 1990 to 1999, which returned 10 results (one entry to each year from 1990 to 1999) and selected the entry for *ETH Zurich Jahresbericht 1993*, which led to the 1993 annual report being found at the following URL: <https://www.research-

collection.ethz.ch/handle/20.500.11850/643838> (webpage submitted as **Exhibit 2004**).

20. Upon finding the entry for Annual Report 1993 (titled also *ETH Zurich Jahresbericht 1993* at the top of the database record for the report), I downloaded the entire report, which appears to be a scanned copy of a printed hardcopy of the 1993 annual report (the scanned copy that I downloaded is submitted as **Exhibit 2005**).[2] This document (**Exhibit 2005**) is written entirely in German—consistent with Attachments 1A, 1C, and 1D from Dr. Hall-Ellis's declaration (**Exhibit 1020**) which I discussed above and further below—whereas Vingralek (**Exhibit 1007**) is written in English. The document (**Exhibit 2005**) appears to be authored by ETH Zurich authors generally. Ex. 2005, 1[3]. Inspecting the entire 77-page scanned copy (**Exhibit 2005**), I see no part of the document that visually matches Vingralek (**Exhibit 1007**), nor do I see any reference to the name

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[2] Similar to Exhibit 1007, Exhibit 2005 also is a scanned copy of a print hardcopy. I note, for example, that there are highlighting and handwritten markings on certain pages (*e.g.*, "Page 13 of 77" and "Page 14 of 77", which correspond to the numbered pages 10 and 11 of the document). Ex. 2005, 13-14.

[3] The pages that I reference here are those found on the lower right corner of Exhibit 2005 (*e.g.*, "Page 1 of 77").

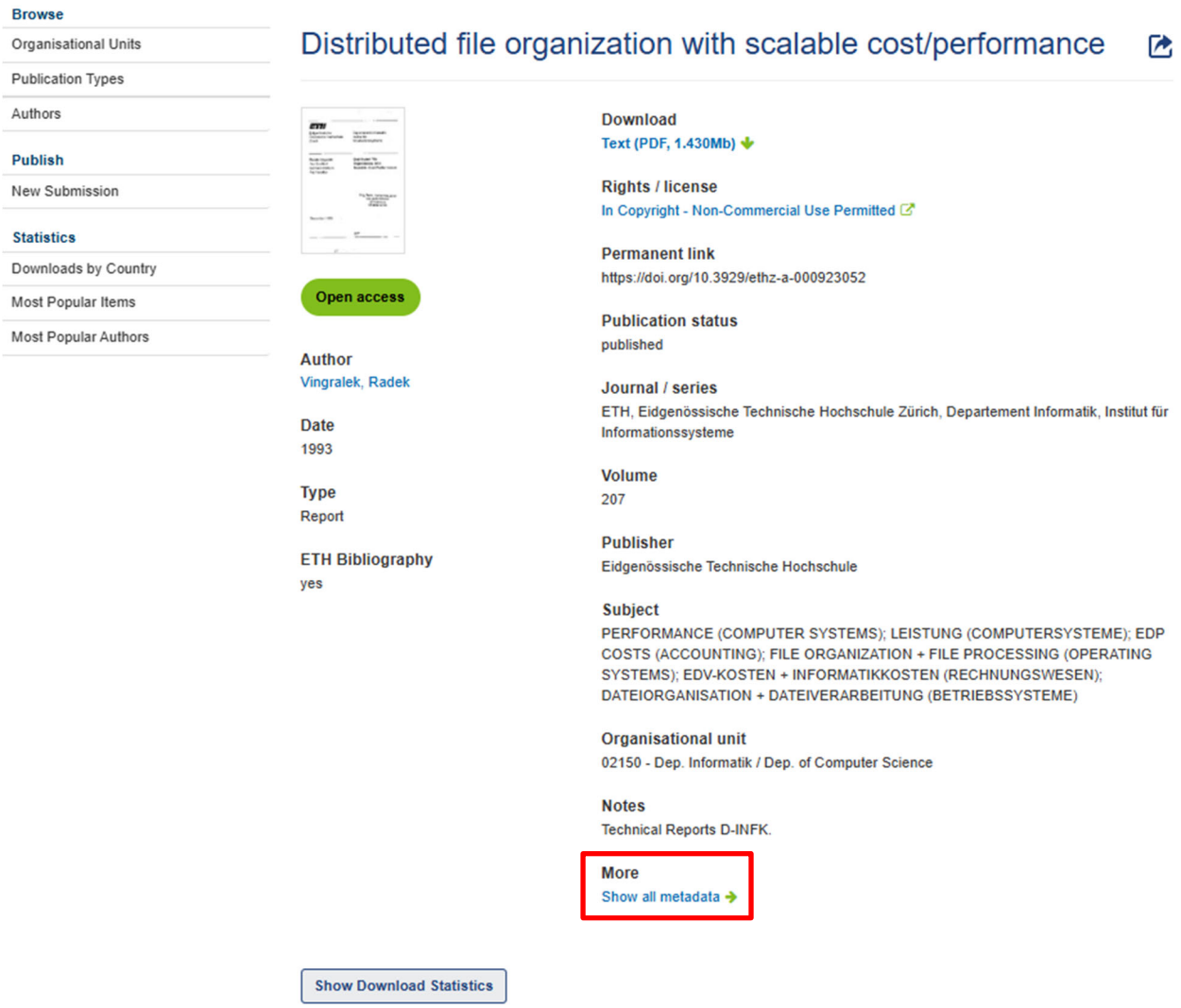
"Vingralek" or "Radek Vingralek". Additionally, I did not see reference to any "Volume 207" of the Jahresbericht anywhere in the document (**Exhibit 2005**).

21. I have been provided with what I have been informed is a certified translation of Exhibit 2005, from German to English **(Exhibit 2011**). I have reviewed this translation for the purpose of visually discerning whether or not Vingralek (in its form as Exhibit 1007) is present. It is my opinion that it is not. I did not find any reference to the name "Vingralek", "Radek Vingralek," or "Volume 207" anywhere in the document **(Exhibit 2011**). I also did not find any reference to the title of Vingralek, "Distributed file organization with scalable cost/performance," or the contents of the Vingralek document (**Exhibit 1007**) anywhere in the English translation (**Exhibit 2011**).

22. Thus, my opinion is that Vingralek (**Exhibit 1007**) was not published "on pages 3-26 in Volume 207 dated December 1993 of the open access *Jahresbericht* [Annual Report] issue of the journal *Eidgenössische Technische Hochschule* [Federal Technical University] Zürich (ETH Zürich)," contrary to Dr. Hall-Ellis's claim.

23. Additional information about the Vingralek document is found on the metadata of the entry for Vingralek in the ETH Zurich repository, at the link referenced in paragraph 48 of Dr. Hall-Ellis' declaration: <https://www.research-collection.ethz.ch/handle/20.500.11850/68912> (webpage submitted as **Exhibit**

2006). The metadata can be accessed on this page by clicking on the "Show all metadata" link of the above URL (red box added):



Browse
Organisational Units
Publication Types
Authors

Publish
New Submission

Statistics
Downloads by Country
Most Popular Items
Most Popular Authors

Distributed file organization with scalable cost/performance

Open access

Author
Vingralek, Radek

Date
1993

Type
Report

ETH Bibliography
yes

Download
Text (PDF, 1.430Mb)

Rights / license
In Copyright - Non-Commercial Use Permitted

Permanent link
https://doi.org/10.3929/ethz-a-000923052

Publication status
published

Journal / series
ETH, Eidgenössische Technische Hochschule Zürich, Departement Informatik, Institut für Informationssysteme

Volume
207

Publisher
Eidgenössische Technische Hochschule

Subject
PERFORMANCE (COMPUTER SYSTEMS); LEISTUNG (COMPUTERSYSTEME); EDP COSTS (ACCOUNTING); FILE ORGANIZATION + FILE PROCESSING (OPERATING SYSTEMS); EDV-KOSTEN + INFORMATIKKOSTEN (RECHNUNGSWESEN); DATEIORGANISATION + DATEIVERARBEITUNG (BETRIEBSSYSTEME)

Organisational unit
02150 - Dep. Informatik / Dep. of Computer Science

Notes
Technical Reports D-INFK.

More
Show all metadata

Show Download Statistics

Ex. 2006 <https://www.research-collection.ethz.ch/handle/20.500.11850/68912>.

24. When I click on the "Show all metadata," I am taken to <https://www.research-collection.ethz.ch/handle/20.500.11850/68912?show=full> (submitted at **Exhibit 2007**), which I have excerpted below:

Distributed file organization with scalable cost/performance

dc.contributor.author	Vingralek, Radek
dc.date.accessioned	2017-11-17T14:34:28Z
dc.date.available	2017-06-10T18:45:16Z
dc.date.available	2017-11-17T14:34:28Z

Ex. 2007 (metadata, available at <https://www.research-collection.ethz.ch/handle/20.500.11850/68912?show=full>).

25. Although Dr. Hall-Ellis does not reference this metadata in her declaration, it shows that Vingralek (**Exhibit 1007**) was first made available in digital format in the ETH Zurich online repository in 2017 (as can be seen in the excerpt shown above).

26. In summary, the only way I was able to access Vingralek (**Exhibit 1007**) was through a repository that does not connect it to the 1993 Annual Report of the ETH Zurich, or any other annual report; that repository shows that Vingralek was uploaded to the online repository in 2017; Vingralek was written in English and contains no indicia of date of public availability; and the 1993 annual report (**Exhibit 2005**) was written in German and does not include Vingralek.

27. I also inspected the attachments provided in Dr. Hall-Ellis's declaration (**Exhibit 1020**). I first inspected Attachment 1A, described in paragraph 46 of Dr. Hall-Ellis's declaration as a copy of the webpage where Vingralek is found

in the Zeitschriftendatenbank (ZDB), the German Union Catalog of Serials. Attachment 1A appears to be the entry for the Annual Report of the ETH Zurich, indicating that it is published yearly beginning in 1973. Attachment 1A describes this serial as an entity but does not describe any individual articles published within it; that is not its purpose. Furthermore, Attachment 1A does not provide any indication that there was a "volume 207" of this serial published in 1993, which is where Dr. Hall-Ellis claimed Vingralek was published. There is no reference to any articles, any individual authors, or any volume. I again note that Attachment 1A identifies that the journal was published in German (not English, as in Vingralek, **Exhibit 1007**). Thus, I also find that the information in Attachment 1A does not support (and, in fact, contradicts) the claims made in Dr. Hall-Ellis's declaration.

28. I then inspected Attachment 1B, which is described in paragraph 49 of Dr. Hall-Ellis's declaration (**Exhibit 1020**) as "the MARC record for the open access *Jahresbericht* [Annual Report] of the journal *Eidgenössische Technische Hochschule* [Federal Technical University] Zürich in the ETH Zürich Library online catalog." Ex. 1020, ¶49. Dr. Hall-Ellis does not describe the search terms or steps she used to find the "MARC record" in Attachment 1B, but she provides a link in footnote 21 of paragraph 49 which automatically generates a search of the ETH Zurich Library online catalog yielding three results, as excerpted below and shown in **Exhibit 2008**:

0 selected 1-3 of 3 results

1 JOURNAL
Jahresbericht - Eidgenössische Technische Hochschule.
Eidgenössische Technische Hochschule
19??
Available Online (Coverage: From 2002)

2 MULTIPLE VERSIONS
Jahresbericht
Eidgenössische Technische Hochschule Zürich (creator);Eidgenössische Technische Hochschule (Zürich)
3 versions found. See all versions

3 MULTIPLE VERSIONS
Geschäftsbericht
Eidgenössische Technische Hochschule Zürich
2 versions found. See all versions

Ex. 2008.

29. Attachment 1B appears to match the first result, which is for the online version of the *Jahresbericht* which began in that format in 2002. I have excerpted this entry below:

JOURNAL
Jahresbericht - Eidgenössische Technische Hochschule.
Eidgenössische Technische Hochschule
19??
Available Online (Coverage: From 2002)

30. To access the MARC record for this result so that I could match it to "Attachment 1B" in Dr. Hall-Ellis's declaration, I clicked the link "Jahresbericht – Eidgenossische Technische Hochschule" in the entry which led me to the full

record for this journal at <https://eth.swisscovery.slsp.ch/discovery/fulldisplay?docid=alma99117224951305503&context=L&vid=41SLSP_ETH:ETH&lang=en&search_scope=DiscoveryNetwork&adaptor=Local%20Search%20Engine&tab=discovery_network&query=any,contains,1015-4191&mode=basic> (submitted as **Exhibit 2009**). I then scrolled to the "Source Record" link at the bottom of the page which led me to the full MARC record for the journal. The MARC record is found at the URL <https://eth.swisscovery.slsp.ch/discovery/sourceRecord?vid=41SLSP_ETH%3AETH&docId=alma99117224951305503&recordOwner=41SLSP_NETWORK> and my own copy of the MARC record is submitted as **Exhibit 2010**. I confirmed that the alphanumeric coding in the initial "leader" line of this record matched the "leader" line of Attachment 1B from Dr. Hall-Ellis' declaration, as well as the remainder of the record.

31. The record for the online version of *Jahresbericht* that I found (**Exhibit 2010**), and that matches Attachment 1B in Dr. Hall-Ellis's declaration, is not the same version as the print version of *ETH Jahresbericht 1993*, which is where it is claimed that Vingralek (**Exhibit 1007**) was published and which version I described above. Attachment 1B and Exhibit 2010 specify in field 300 that the physical description of this version of Jahresbericht is an "online resource" rather than a printed report, where Vingralek is claimed to have been published as

established by the indicia found on the face of Vingralek as I described above. Furthermore, Attachment 1B contains no information about the volume numbers of *Jahresbericht ETH Zurich,* including whether there was a "volume 207", which is the volume in which it is claimed that Vingralek was published. Attachment 1B does not connect Vingralek to the *Jahresbericht ETH Zurich* publication and does not provide any evidence that Vingralek (**Exhibit 1007**) was published in the *Jahresbericht*. Using my search of the ETH Zurich Library online catalog, I can find no support for Dr. Hall-Ellis's statements made in paragraph 49 of her declaration (**Exhibit 1020**) that Attachment 1B is the true and correct copy of the MARC record for the print copy of *Jahresbericht ETH Zurich 1993*, where she claimed Vingralek was published. There is no reference to any articles, any individual authors, or any volume. Thus, I also find that the information in Attachment 1B does not support (and, in fact, contradicts) the claims made in Dr. Hall-Ellis's declaration.

32. I then inspected Attachment 1C, which is described in paragraph 52 of Dr. Hall-Ellis's declaration as a "copy of the MARC record for the journal *Eidgenössische Technische Hochschule* [Federal Technical University] Zürich obtained from the OCLC bibliographic database." Ex. 1020, ¶52. I can corroborate the statements made in Dr. Hall-Ellis's declaration in paragraphs 52 and 53 regarding the interpretation of the data contained in the various fields of this MARC record, with the exception that I do not find that the information contained in this

MARC record provides any link between Vingralek and the journal ETH Zurich as stated in the last sentence of paragraph 52 of Dr. Hall-Ellis's declaration (**Exhibit 1020**). I also cannot use the information in Attachment 1C to establish that there was a volume 207 of the journal ETH Zurich published in 1993, which is where Vingralek is claimed to be published. There is no reference to any articles, any individual authors, or any volume. I again note that Attachment 1C provides "Language Code" of German, that is, the journal was published in German (not English, as in Vingralek, **Exhibit 1007**). Thus, I also find that the information in Attachment 1C does not support (and, in fact, contradicts) the claims made in Dr. Hall-Ellis's declaration (**Exhibit 1020**).

33. I then inspected Attachment 1D, which is described in paragraph 54 of Dr. Hall-Ellis's declaration (**Exhibit 1020**) as the web page where the Annual Report of ETH Zurich is found on WorldCat, the publicly available version of the OCLC database. I can corroborate the statements made in the declaration in paragraph 54 regarding the interpretation of the data contained in the various fields of the Worldcat record, but I do not find that the information in Attachment 1D provides any connection between Vingralek and the Annual Report of ETH Zurich nor that there was a volume 207 of the journal ETH Zurich published in 1993. There is no reference to any articles, any individual authors, or any volume. I again note that Attachment 1D identifies that it was published in German (not English, as in

Vingralek, **Exhibit 1007**). Thus, I also find that the information in Attachment 1D does not support (and, in fact, contradicts) the claims made in Dr. Hall-Ellis's declaration (**Exhibit 1020**).

34. I have also reviewed **Exhibit 1015**, which Dr. Hall-Ellis describes as "a copy the journal article titled 'The Database Research Group at ETH Zurich,' by Moira C. Norrie, Stephen M. Blott, Hans-Jörg Schek, and Gerhard Weikum (hereafter 'Norrie')," as well as Dr. Hall-Ellis's declaration as it concerns "Norrie" (**Exhibit 1015**) and its reference in footnote 3 to:

> [3] R. Vingralek, Y. Breitbart, G. Weikum and R. Yavatker, "Distributed File Organisation with Scalable Cost/Performance", Technical Report 207, Dept. of Computer Science, ETH Zurich, Switzerland, December 93.

Ex. 1015, 8 (*i.e.*, page 121 of Norrie using Norrie's pagination).

35. According to Dr. Hall-Ellis in paragraph 63 of her declaration (**Exhibit 1020**), she "understand[s] that this citation in Norrie refers to Vingralek" and it "confirms that Vingralek was published and publicly accessible on or shortly after the date discussed above for Vingralek and/or at least published and publicly accessible on March 1, 1994 as discussed for Norrie." I disagree that footnote 3 of Norrie confirms publication and public accessibility of Vingralek on March 1, 1994 (or any other date).

36. Initially, in paragraphs 52-61 of Dr. Hall-Ellis's declaration discussing Norrie (**Exhibit 1015**), Dr. Hall-Ellis describes the cataloging of the *SIGMOD Record* generally. The Attachments she provides (Attachments 2A, 2B, 2C, 2D, and 2E) also focus on the *SIGMOD Record* itself. They do not provide any indication of the contents of any article, nor any indication of how anyone would search for and locate a particular article within any record. In other words, Dr. Hall-Ellis does not describe the cataloging or indexing of any article within any *SIGMOD Record*. Thus, based on the evidence submitted by Dr. Hall-Ellis, someone searching for Norrie would need to review each *SIGMOD Record*, its table of contents, and the documents within the record, to find the particular article at issue. And, for Norrie (**Exhibit 1015**), the title is simply "The Database Research Group at ETH Zurich," which appears to generally refer to the group at the university and does not describe any particular content or topic.

37. Moreover, Dr. Hall-Ellis does not provide any evidence or assertion as to when Norrie may have been published in an online form. In footnote 23 of paragraph 55, she provides a link to a URL <https://dl.acm.org/doi/pdf/10.1145/181550.181567> and states that "[t]he Norrie article is available in the *ACM Digital Library* which indicates a March 1, 1994, publication date." Ex. 1020, ¶55. I note that the document available at the link is not the same as the version that was submitted as **Exhibit 1015**. I downloaded the

document available at the link, which is submitted as **Exhibit 2012**. In particular, the online version is 6 pages (compared to 8 pages for Norrie (**Exhibit 1015**)) and does not include the general cover page or table of contents included in Norrie (**Exhibit 1015**), which Dr. Hall-Ellis appears to indicate is a "print copy." Ex. 1020, ¶57. Further, there is no indication or evidence as to when an online version was first made publicly available.

38. However, regardless of whether Norrie (**Exhibit 1015**) was indexed and cataloged, I note Norrie (**Exhibit 1015**) shares common authorship with Vingralek (**Exhibit 1007**), in particular, both include Gerhard Weikum as an author and also both are from the department of the same university (Department of Computer Science at ETH Zurich). I further note Dr. Hall-Ellis does not assert or provide any evidence that the "Technical Report" referenced in footnote 3 was ever indexed or cataloged or how or if it was publicly accessible by anyone (apart from being listed in Norrie and being put into the online database, which occurred in 2017, as I discussed above). There is no indication or evidence from Norrie (**Exhibit 1015**) that Vingralek (**Exhibit 1007**) was published in any publication (whether in the Annual Report that I have discussed above or elsewhere), made available and indexed in any library, or ever made available in an online repository. Nor is there any indication or evidence that Vingralek was known to anyone outside of the authors, let alone anyone else in the department, the university, or the public. More

generally, I note Dr. Hall-Ellis does not assert or provide any evidence that any "Technical Report" was ever indexed or cataloged or how or if it was publicly accessible by anyone (again, apart from Vingralek being put into the online database, which occurred in 2017, as I discussed above).

39. I also note that the title of Vingralek (**Exhibit 1007**) is spelled differently than the document in footnote 3 of Norrie, in particular, the spelling of "Organization" versus "Organisation." This raises further questions about the document referenced in footnote 3 of Norrie relative to Vingralek (**Exhibit 1007**), especially when Norrie does not include or describe the contents of the document referenced in footnote 3.

40. In my opinion, the common authorship, department, and university, together with the lack of any other indication that Vingralek was cataloged and indexed or known outside of the authors or department, further confirms that Vingralek (**Exhibit 1007**) was not published and publicly accessible as of December 1993 (based on Dr. Hall-Ellis's Annual Report theory discussed above) or March 1994 (based on the footnote 3 in Norrie). Also in my opinion, and in my experience, given these commonalities, it is highly probable that the Vingralek document referenced in footnote 3 (even assuming it is the same as Vingralek (**Exhibit 1007**)) was known to the Norrie authors simply because of the common authorship and department, rather than being published and publicly accessible. I

further note that all three citations in the section of Norrie containing footnote 3 include Gerhard Weikum as an author, which in my opinion, provides further indication that the reference in footnote 3 was most likely known because of common authorship, and is not indicative of being indexed or cataloged anywhere (for which Dr. Hall-Ellis provides no evidence of regardless).

III. CONCLUSION

41. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

November 18, 2024

Date

Nancy E. Adams, Ed.D.