

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ALIGN TECHNOLOGY, INC.,
Petitioner,

v.

DENTAL MONITORING SAS,
Patent Owner.

Case No. IPR2024-00052
Patent No. 11,049,248

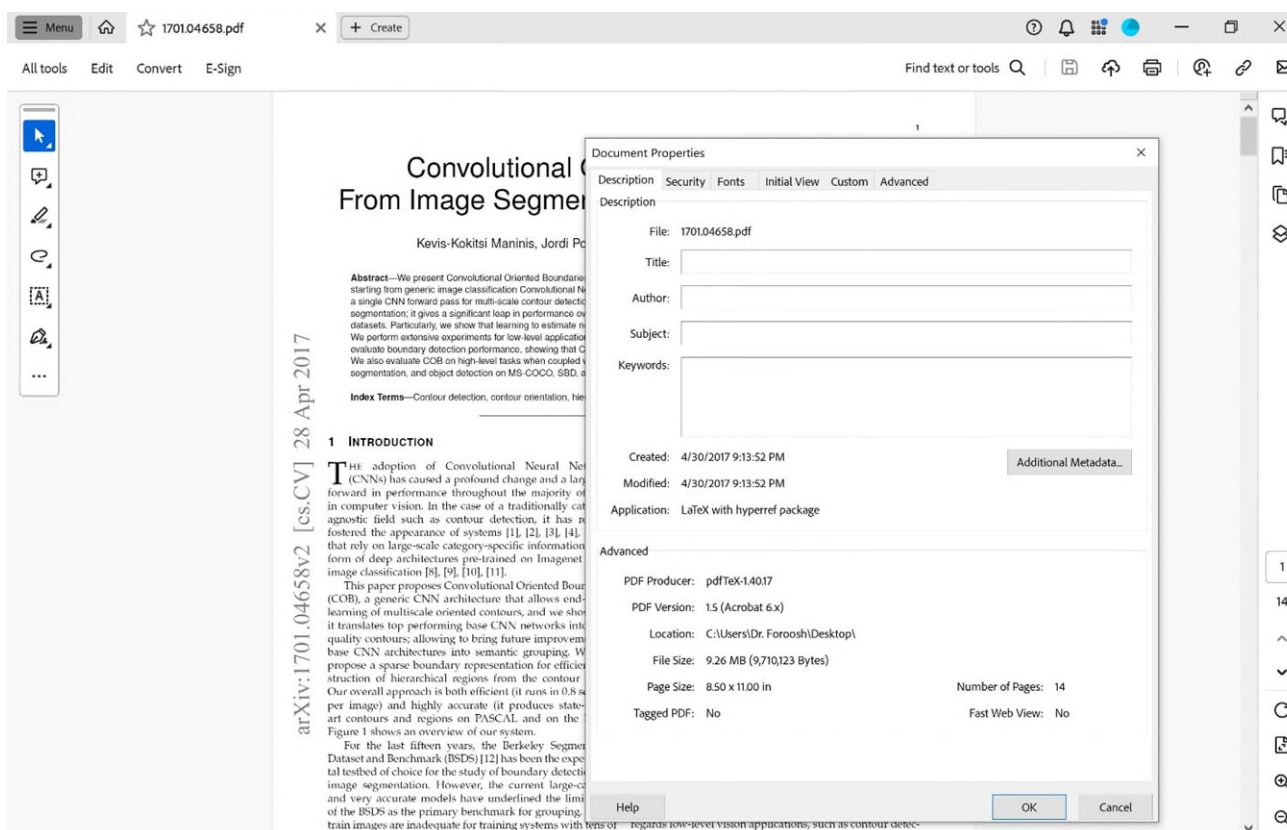
SECOND DECLARATION OF DR. HASSAN FOROOSH

I, Hassan Foroosh, declare as follows:

1. I am the same Hassan Foroosh who previously submitted a declaration (EX1002; “Original Declaration”) in this *Inter Partes Review* (“IPR”) proceeding, filed with the petition. My Original Declaration set forth my credentials, qualifications, and publications. My *curriculum vitae* was provided as EX1003.

2. I make this declaration based on my personal knowledge and inspection of Exhibits 1002, 1007, 1015, and 1017.

3. In paragraph 57 of my Original Declaration, in discussing the Maninis publication (EX1007), I described that I “reviewed metadata contained in a copy of Maninis downloaded from the download link (<https://arxiv.org/pdf/1701.04658>),” which I noted “indicates that the document was created and last modified on April 30, 2017.” EX1002, ¶57. The metadata I referred to in that paragraph was the creation and modification dates recorded in the document properties of the Maninis PDF file as downloaded from the link reproduced above, which was submitted as EX1007. These dates can be viewed by opening the document in a PDF reader (such as Adobe Reader), opening the document properties window, and reading the creation and modification dates. I have done so with a copy of Maninis downloaded from the link above, and the image below is from a screenshot showing this data, including the creation and modification dates of April 30, 2017, that I described in my Original Declaration.



4. I have reviewed and am familiar with Exhibit 1015, which is a true and correct copy of “ImageNet Classification with Deep Convolutional Neural Networks” by Alex Krizhevsky et al. Exhibit 1015 is an article published in 2012 as part of NeurIPS proceedings in *Advances in Neural Information Processing Systems* (NIPS 2012). I obtained this article from the NeurIPS website, which makes copies of the article available for download from a link on the article’s webpage

https://proceedings.neurips.cc/paper_files/paper/2012/hash/c399862d3b9d6b76c8436e924a68c45b-Abstract.html. I have relied on such articles from the NeurIPS

website in my own research and practice outside the context of litigation, and it would have been typical for POSAs in 2017 to obtain articles from the NeurIPS website. Indeed, I have long been familiar with this particular article, and I have cited to it in my own published research, including research I published prior to July 2017. As one example, in paragraph 8 of my Original Declaration, I noted that I was a coauthor of a paper with Amara Tariq that was first published as *Image Annotation using Multi-Layer Sparse Coding* on the ArXiv website (<https://arxiv.org/pdf/1705.02460>) on May 6, 2017. This paper cited to the Krizhevsky article that was submitted as Exhibit 1015. As another example, I was a coauthor (along with Baoyuan Liu, Min Wang, Marshall Tappen, Marianna Pensky) of “Sparse Convolutional Neural Networks,” a paper published in the 2015 IEEE Conference on Computer Vision and Pattern Recognition (CVPR), and which also cited to the Krizhevsky article.

5. I have reviewed and am familiar with Exhibit 1017, which is a true and correct copy of “Learning Class-specific Edges for Object Detection and Segmentation” by Mukta Prasad et al. Exhibit 1017 is an article published in the 2006 proceedings of the 5th Indian Conference in Computer Vision, Graphics and Image Processing (ICVGIP 2006). I obtained the paper submitted as Exhibit 1017 from the ResearchGate website, where it was uploaded by Philip Torr (one of the co-authors) in 2014. The paper is available to download from ResearchGate at

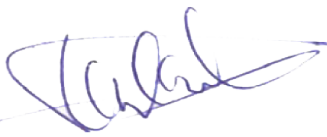
https://www.researchgate.net/publication/221551833_Learning_Class-Specific_Edges_for_Object_Detection_and_Segmentation. ResearchGate is an European scientific social networking site founded in 2008, where authors can share their papers and collaborate. I have relied on articles from ResearchGate in my own research and practice outside the context of litigation. It would have been normal practice for POSAs in 2017 to obtain papers like this one from ResearchGate.

6. The same paper in Exhibit 1017 is also available for download from the publications page of the Oxford Visual Geometry Group at <https://www.robots.ox.ac.uk/~vgg/publications/>, which was archived by the Internet Archive's Wayback Machine on December 16, 2014, as available at <http://web.archive.org/web/20141216180932/http://www.robots.ox.ac.uk/~vgg/publications>. The download link for the paper (<https://www.robots.ox.ac.uk/~vgg/publications/2006/Prasad06a/prasad06a.pdf>) is present in both the current day and archived versions of the Oxford Visual Geometry Group publications page, and associated with that link, the publications page indicates that it was published in the "Indian Conference on Computer Vision, Graphics and Image Processing, Dec 2006."

7. I declare that all statements made herein of my knowledge are true, and that all statements made on information and belief are believed to be true, and

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.

Dated: 05/12/2024

By: 
Hassan Foroosh, Ph.D.