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*Attorneys for Defendant/Counterclaim-Plaintiff
International Business Machines Corporation*

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF UTAH

THE SCO GROUP, INC.

Plaintiff/Counterclaim-Defendant,

-against-

INTERNATIONAL BUSINESS MACHINES
CORPORATION,

Defendant/Counterclaim-Plaintiff.

**DECLARATION OF
RANDALL DAVIS**

Civil No. 2:03CV-0294 DAK

Honorable Dale A. Kimball

Magistrate Judge Brooke C. Wells

I. INTRODUCTION

1. I am a professor of Computer Science at the Massachusetts Institute of Technology in Cambridge, Massachusetts. Addendum A provides more details of my technical background and experience, a list of publications, and a list of cases in which I have testified or been deposed. I received my undergraduate degree in Physics from Dartmouth College in 1970 and a Ph.D. in Computer Science from Stanford in 1976.
2. I have published some 50 articles on issues related to artificial intelligence and have served on several editorial boards, including *Artificial Intelligence*, *AI in Engineering*, and the MIT Press series on AI. I am a co-author of *Knowledge Based Systems in AI*.
3. In recognition of my research in artificial intelligence, I was selected in 1984 as one of America's top 100 scientists under the age of 40 by *Science Digest*. In 1986 I received the *AI Award* from the Boston Computer Society for contributions to the field. In 1990 I was named a Founding Fellow of the American Association for AI and in 1995 was elected to a two-year term as President of the Association. From 1995-1998 I served on the Scientific Advisory Board of the U.S. Air Force.
4. In addition to my work with artificial intelligence, I have also been active in the area of intellectual property and software. Among other things, I have served as a member of the Advisory Board to the US Congressional Office of Technology Assessment study on software and intellectual property, published in 1992 as *Finding a Balance: Computer Software, Intellectual Property, and the Challenge of Technological Change*. I have published a number of articles on the topic, including co-authoring an

article in the *Columbia Law Review* in 1994 entitled "A Manifesto Concerning Legal Protection of Computer Programs" and an article in the *Software Law Journal* in 1992 entitled "The Nature of Software and its Consequences for Establishing and Evaluating Similarity."

5. From 1998-2000 I served as the chairman of the National Academy of Sciences study on intellectual property rights and the emerging information infrastructure entitled *The Digital Dilemma: Intellectual Property in the Information Age*, published by the National Academy Press in February 2000.

6. I have been retained as an expert in over thirty cases dealing with alleged misappropriation of intellectual property, such as the allegations raised in this case, and have done numerous comparisons of code. I have been retained by plaintiffs who have asked me to investigate violations of intellectual property, by defendants who have asked me to investigate allegations made against them, and by both sides to serve as the sole arbiter of a binding arbitration.

7. In 1990 I served as expert to the Court (Eastern District of NY) in *Computer Associates v. Altai*, a software copyright infringement case that articulated the abstraction, filtration, comparison test for software. I have also been retained by the Department of Justice on its investigation of the INSLAW matter. In 1992 (and later in 1995) my task in that engagement was to investigate alleged copyright theft and subsequent cover-up by the Federal Bureau of Investigation, the National Security Agency, the Drug Enforcement Agency, the United States Customs Service, and the Defense Intelligence Agency.

II. ASSIGNMENT/SUMMARY OF FINDINGS

8. I have been asked by counsel for IBM to examine the 198 Items in SCO's December 22, 2005 Disclosure of Material Allegedly Misused by IBM (the "Final Disclosures") that are challenged by IBM in its Motion to Limit SCO's Claims Relating to Allegedly Misused Material ("IBM's Motion"). Specifically, I have been asked to (1) determine the extent to which SCO has specified its claims, by identifying versions, files and lines of code with respect to each of the items; and (2) describe the effort that would be required to evaluate SCO's allegations based on the level of specificity that it has provided.

9. In summary, SCO fails specifically to identify lines of System V, AIX or Dynix, and Linux material with respect to any of the 198 Items. As a result, it is impossible fully to evaluate SCO's claims.

III. ANALYSIS

10. In its Final Disclosures, SCO identifies 294 Items of allegedly misused material, including the 198 Items at issue in IBM's motion. I have reviewed the 198 Items to consider the extent to which they describe SCO's claims with specificity.

11. I conclude that SCO has failed to identify with specificity any of the 198 Items. SCO does not provide a complete set of reference points (version, file and line) for any of the 198 Items, which makes it practically impossible fully to evaluate SCO's claims.

12. As shown in Addendum B, SCO does not specifically identify lines of System V, AIX or Dynix, and Linux material for any of the 198 Items. SCO does not identify

with specificity System V, AIX, or Dynix version(s) or file(s) with respect to more than a few of the Items. Specific versions and files of Linux code are omitted with respect to many of the Items.

13. In its memorandum in opposition to IBM's preclusion motion, SCO tells the Court that it has provided "color coded illustrations", "line by line source code comparisons" and "over 45,000 pages of supporting materials". However, tens of thousands of those pages concern Item 294, which SCO expressly abandons in its opposition brief. While the Final Disclosures include color-coded illustrations and line-by-line source comparisons, they either do not do so with regard to any of the 198 Items at issue or the materials provided do little to particularize SCO's claims.

14. Absent more specific information about SCO's claims, an extraordinary effort would be required to evaluate the claims. In fact, based on the information SCO has provided, it would be impossible fully to evaluate SCO's claims without considering the entire universe of potentially relevant code.

15. SCO's failure to specify its claims puts on IBM the impossible burden of looking for undefined needles in an enormous haystack. The multiple versions of Unix, AIX, Dynix, and Linux comprise more than 1 billion lines of code.

16. The size of the haystack is only part of the problem. With enough time, IBM would likely be able to search the haystack for the allegedly misused material, although I note that SCO's Mr. Sontag testified that it would take 25,000 man years to compare a single version of Linux (a mere 4,000,000 lines of code) to a single version of Unix.

17. The true difficulty with the Items at issue is that SCO does not describe the needles it is sending IBM to find. Instead of defining the 198 items at issue by providing version, file and line information, SCO describes them generally and imprecisely. As a result, the needles look just like hay. This suggests that SCO does not know what it claims or is hiding what it claims.

18. To take just one example (of many), in Item 146, SCO identifies IBM's "Use of Dynix/ptx for Linux development" by reference to an email that concerns "performance and profiling" and lists 11 Linux files without mentioning which versions of Linux these files come from.

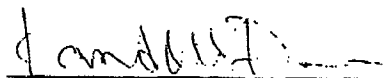
19. This provides no meaningful information about what IBM is alleged to have done wrong. SCO does not say where such "profiling" was done in System V or Dynix or even where specifically it is allegedly done in Linux. Absent more information, it is practically impossible for IBM to conduct a proper investigation to fully defend itself.

20. I understand, and for this purpose assume, that SCO's claims require inquiry into, among other things, the origin of the code and concepts (which are, of course, embodied in code), the value of the code, whether SCO distributed the code under the GPL, whether it was developed to comply with publicly known standards, whether the code is dictated by externalities, whether the code is merely an unprotectable idea, whether the code ever shipped without a required copyright notice and whether the code is otherwise in the public domain. These questions must be answered on a line by line basis. And that cannot be done properly without knowing which versions, files and lines are at issue.

IV. SUMMARY

21. SCO has failed to provide the most basic information relating to the 198 Items at issue in IBM's motion. SCO has declined, as a practical matter, to tell IBM what is in dispute. SCO's failure to specify its claims puts on IBM the impossible burden of searching an enormous haystack for needles that look just like hay.

22. I declare under the penalty of perjury that the foregoing is true and correct.

A handwritten signature in cursive script, appearing to read "Randall Davis", is written over a horizontal line.

Randall Davis

Date: 29 March 2006

Place: Taipei, Taiwan

CERTIFICATE OF SERVICE

I hereby certify that on the 4th day of April, 2006, a true and correct copy of the foregoing was sent by U.S. Mail, postage prepaid, to the following:

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ADDENDUM A

Addendum A

RANDALL DAVIS

Randall Davis received his undergraduate degree from Dartmouth, graduating summa cum laude, Phi Beta Kappa in 1970, and received a PhD from Stanford in artificial intelligence in 1976.

In 1978 he joined the faculty of the Electrical Engineering and Computer Science Department at MIT, where from 1979-1981 he held an Esther and Harold Edgerton Endowed Chair. He later served for 5 years as Associate Director of the Artificial Intelligence Laboratory. He is currently a Full Professor in the Department, and a Research Director of CSAIL, the newly-formed Computer Science and Artificial Intelligence Laboratory that resulted from the merger of the AI Lab and the Lab for Computer Science. He and his research group are developing advanced tools that permit natural, sketch-based interaction with software, particularly for computer-aided design and design rationale capture.

Dr. Davis has been one of the seminal contributors to the field of knowledge-based systems, publishing some 50 articles and playing a central role in the development of several systems. He serves on several editorial boards, including Artificial Intelligence, AI in Engineering, and the MIT Press series in AI. He is the co-author of Knowledge-Based Systems in AI, and was selected in 1984 as one of America's top 100 scientists under the age of 40 by Science Digest. In 1986 he received the AI Award from the Boston

Computer Society for his contributions to the field. In 1990 he was named a Founding Fellow of the American Association for AI and in 1995 was elected to a two-year term as President of the Association. In 2003 he received MIT's Frank E. Perkins Award for graduate advising. From 1995-1998 he served on the Scientific Advisory Board of the U.S. Air Force.

Dr. Davis has been a consultant to several major organizations, including Digital Equipment Corp, IBM, Aetna, and Schlumberger, and has been involved in the founding of three software companies.

Dr. Davis has also been active in the area of intellectual property and software. In 1990 he served as expert to the Court in *Computer Associates v. Altai*, (775 F. Supp. 544 (E.D.N.Y. 1991); 982 F 2d 693) a case that produced the abstraction, filtration, comparison test for software copyright. He served on the panel run by the Computer Science and Telecommunications Board (CSTB) of the National Academy of Science in 1991 that resulted in *Intellectual Property Issues in Software*, and served as a member of the Advisory Board to the US Congressional Office of Technology Assessment study on software and intellectual property that was published in 1992 as *Finding a Balance: Computer Software, Intellectual Property, and the Challenge of Technological Change*. A 1994 paper in the *Columbia Law Review* analyzed the difficulties in applying intellectual property law to software and proposed a number of remedies.

He has served as an expert in a variety of cases involving software, including the investigation by the Department of Justice of the Inslaw matter (40 Fed. Cl. 843; 1998 U.S. Claims), where he investigated allegations of copyright theft and cover-up by the Federal Bureau of Investigation, the National Security Agency, the Drug Enforcement Agency, the United States Customs Service, and the Defense Intelligence Agency. From 1998-2000 he served as the chairman of the National Academy of Sciences study on intellectual property rights and the information infrastructure entitled *The Digital Dilemma: Intellectual Property in the Information Age*, published by the National Academy Press in February, 2000.

Dr. Davis has appeared on *The Macneil/Lehrer Report and Innovations* (WNET, NY), and played a major role in *This Computer Thing*, a pilot for an educational series (WGBH, Boston) about personal computers. He has been quoted in articles in *The New York Times*, *The Wall Street Journal*, *Business Week*, *The Economist*, *The Boston Globe*, *High Technology*, and *Psychology Today*. Interviews have appeared in *Computerworld* and on National Public Radio's *All Things Considered*. He has been a featured speaker in Texas Instrument's Satellite Symposium, and on *Electronic Data Systems'* internationally broadcast "Directions" program.

ADDENDUM B

Items	System V			ABX			Dmix			Linux		
	V	F	L	V	F	L	V	F	L	V	F	L
50											X	
51											X	
52											X	
53									**		X	
54											X	
55									**		X	
56											X	
57											X	
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69											X	
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71											X	
72											X	
73										*	X	
74											X	
75										*	X	
76											X	
77											X	
78											X	
79											X	
80											X	
81											X	
82											X	
83										X	X	
84											X	
85						X					X	
86								X			X	
87											X	
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89											X	
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92											X	
93											X	
94											X	
95											X	
96											X	
97											X	
98											*	

Items	System			AD			PMB			LHM	
	V	F	L	V	F	L	V	F	L	V	F
100										X	*
101											X
102											X
103											X
104											X
105											X
106											X
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122											
123	X	X		X	X						
124											X
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299											X
300											X

Items	System			AIX			DVI			IPIX		
	V	F	L	V	F	L	V	F	L	V	F	L
244										X	X	
245										X	X	
246										X	X	
247										X	X	
248										X	X	
249										X	X	
250										X	X	
251										X	X	
252										X	X	
253										X	X	
254										X	X	
255										X	X	
256										X	X	
257											*	
258											X	
259											X	
260										X	X	
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263										X	X	
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265										X	X	
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289												

Items	System			AIX			Linux			LTP		
	V	F	L	V	F	L	V	F	L	V	F	L
2001												
2002												
2003												
2004												

V = Product version identified
 F = File name identified
 L = Lines of code identified

* Indicates that only Linux patch information is given
 ** Indicates that some lines of code are displayed, but none specifically identified as misused
 † Indicates that only Linux Test Project (LTP) information is given