

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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GOOGLE INC.,  
SAMSUNG ELECTRONICS AMERICA, INC., and  
SAMSUNG ELECTRONICS CO., LTD.,  
Petitioner,

v.

MICROGRAFX, LLC,  
Patent Owner.

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Case IPR2014-00533 (Patent 6,057,854) and  
Case IPR2014-00534 (Patent 6,552,732 B1)

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Before SALLY C. MEDLEY, RICHARD E. RICE, and  
BARBARA A. PARVIS, *Administrative Patent Judges*.

PARVIS, *Administrative Patent Judge*.

FINAL WRITTEN DECISION  
*35 U.S.C. § 318(a) and 37 C.F.R. § 42.73*

I. INTRODUCTION

*A. Background*

Google Inc., Samsung Electronics America, Inc., and Samsung Electronics Co., Ltd. (collectively “Petitioner”) filed related petitions for

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

*inter partes* review of U.S. Patent Nos. 5,959,633;<sup>1</sup> 6,057,854 (“the ’854 Patent”); and 6,552,732 B1 (“the ’732 Patent”). See IPR2014-00533, Paper 5 (“Pet.”), 3; Amended Mandatory Notices of the Patent Owner pursuant to 37 C.F.R. § 42.8, 1 (Paper 9, “Am’d Man. Not.”). The ’854 Patent and the ’732 Patent have similar Specifications and Claims.<sup>2</sup>

The proceedings are summarized below.

Proceeding	Patent	Challenged Claims
IPR2014-00533	The ’854 Patent	1–3, 5, 7, 10–12, 14, 16, 19, 44, 54–57, 59, 61–66, 68, 69, and 71
IPR2014-00534	The ’732 Patent	1–5, 8, 9, 12, 36, and 42

We instituted trial for all the challenged claims of the ’854 Patent and the ’732 Patent based on the same single ground: that each of the challenged claims is unpatentable, under 35 U.S.C. § 102, as anticipated by Pesce.<sup>3</sup> Paper 11 (“Decision to Institute” or “Inst. Dec.”)<sup>4</sup> Given the similarities and overlap in the ground of unpatentability, we, therefore, issue one Final Written Decision for both IPR2014-00533 and IPR2014-00534.

After institution of trial, Micrografx, LLC (“Patent Owner”) filed a Patent Owner Response. Paper 22 (“PO Resp.”). Petitioner filed a Reply to the Patent Owner Response. Paper 25 (“Pet. Reply”). A consolidated hearing for IPR2014-00532, IPR2014-00533, and IPR2014-00534 was held

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<sup>1</sup> U.S. Patent No. 5,959,633 is challenged in IPR2014-00532, which involves the same parties.

<sup>2</sup> The ’732 Patent issued from a continuation of the application that issued as the ’854 Patent. Compare IPR2014-00534 Ex. 1001 with IPR2014-00533 Ex. 1001.

<sup>3</sup> MARK PESCE, VRML BROWSING AND BUILDING CYBERSPACE (New Riders Publishing, 1995) (“Pesce,” Ex. 1004).

<sup>4</sup> Unless otherwise noted, citations herein will be to IPR2014-00533.

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

on May 18, 2015. The transcript of the consolidated hearing has been entered into the record. Paper 37 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is issued pursuant to 35 U.S.C. § 328(a) and 37 C.F.R. § 42.73.

For the reasons given, we conclude that Petitioner has shown by a preponderance of the evidence that the challenged claims of the ’854 Patent and the ’732 Patent are unpatentable.

#### *B. Related Lawsuits*

The parties represent that the ’854 Patent and the ’732 Patent are the subject of *Micrografx, LLC v. Google, Inc.*, Case No. 3:13-cv-03595-N (N.D. Tex.), and *Micrografx, LLC v. Samsung Telecommunications America, LLC*, Case No. 3:13-cv-03599-N (N.D. Tex.). Pet. 3; Am’d Man. Not. 1.

#### *C. The ’854 Patent*

The ’854 Patent is directed to interactive vector graphics. Ex.1001, 3:8–9. According to one embodiment of the invention, interactive vector graphics are provided over a network. *Id.* at 3:6–10. Figure 2 is reproduced below.

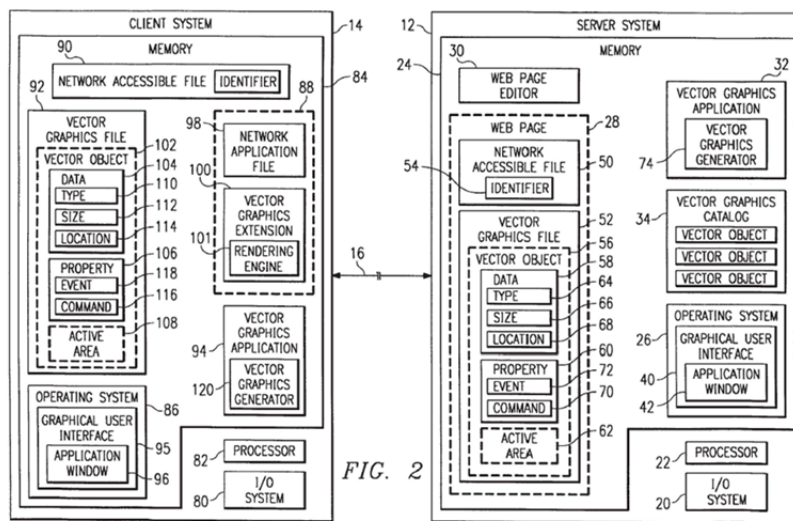


Figure 2 of the '854 patent illustrates server system 12 and client system 14 connected by network 16.

As shown in Figure 2, memory 24 of server system 12 stores web page 28. Ex. 1001, 4:23–40. Web page 28 comprises vector graphics file 52. *Id.* at 4:47–48. Vector graphics file 52 comprises one or more vector objects 56. *Id.* at 5:5–6. Vector object 56 comprises data 58, one or more properties 60, and active area 62. *Id.* at 5:6–8.

Property 60 defines command 70 to be performed in response to event 72 within active area 62 of vector object 56. Ex. 1001, 5:14–16. Command 70 may be Jump, In Place Jump, Status Line, Cursor Shape, Object Color, Object Text, Move Over, Hide Object, or Show Object. *Id.* at 5:17–20. The Jump command instructs a browser to load and display a newly specified URL. *Id.* at 5:20–21.

Active area 62 may conform to the image of vector object 56 or may be defined by an upper, lower, central, exterior or other portion of vector object 56. Ex. 1001, 5:50–57. An image may be made to respond to user-initiated events and to perform specified actions. *Id.* at 2:24–25.

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

Memory 84 of client system 14 stores vector graphics file 52 after it is retrieved from server system 12 via network 16. Ex. 1001, 6:60–7:6. Vector graphics file 92 is copied from vector graphics file 52. *Id.* at 7:19–21. Vector graphics extension 100 includes rendering engine 101 that is operable to read vector graphics file 92 and render images of vector objects 102. *Id.* at 7:30–34.

*D. Illustrative Claim*

Claims 1, 10, 44, 55, and 64 of the '854 Patent are the independent claims challenged by Petitioner. Each of claims 2, 3, 5, 7, 11, 12, 14, 16, 19, 54, 56, 57, 59, 61–63, 65, 66, 68, 69, and 71 of the '854 Patent depends, directly or indirectly, from one of claims 1, 10, 44, 55, and 64.

Claims 1, 8, 36, and 42 are the independent claims of the '732 Patent challenged by Petitioner. Each of claims 2–5, 9, and 12 of the '732 Patent depends, directly or indirectly, from one of claims 1, 8, 36, and 42.

Claim 1 of the '854 Patent and Claim 1 of the '732 Patent are illustrative. Claim 1 of the '854 Patent is reproduced below (emphases added):

1. An interactive vector object stored on a computer readable medium and operable to be downloaded over a network comprising:
  - data operable to be downloaded to a client system connectable to the network and in connection with a vector graphics network file to render an image of the vector object on the client system;
  - an active area defined by the vector object; and*
  - a property defining a command to be performed in response to an event within the active area of the vector object.*

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

Claim 1 of the '732 Patent is reproduced below (emphasis added):

1. An interactive vector object stored on a computer readable medium and operable to be downloaded over a network, the vector object comprising:

data operable to be downloaded to a client system connectable to the network and, in connection with a vector graphics network file, to render an image of the vector object on the client system; and

*an active area defined by the vector object; the active area associated with a command to be performed in response to an event therein.*

## II. ANALYSIS

### A. Claim Construction

#### 1. Legal Standard

As a step in our analysis, we determine the meaning of the claims for purposes of this decision. In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Techs., LLC.*, 778 F.3d 1271, 1281 (Fed. Cir. 2015) (“Congress implicitly adopted the broadest reasonable interpretation standard in enacting the [America Invents Act (Pub. L. No. 112–29, 125 Stat. 284 (2011))] (‘AIA’),” and “the standard was properly adopted by [United States Patent and Trademark Office (‘USPTO’)] regulation.”). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007) (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc)).

## 2. Decision to Institute

In the Decision to Institute, we determined the broadest reasonable interpretation of terms construed by one of the parties. Inst. Dec. 7–13. Our constructions are summarized below.

Claim Term	Construction
“interactive vector object”	“[A] computer software object that includes at least a mathematic description of a graphical image and one definition so that the graphical image responds to events.” <i>Id.</i> at 8.
“active area”	“[A]n area in which an event is recognized that initiates a command.” <i>Id.</i> at 9.
“vector graphics network file”	“[C]omputer software that connects to a server over a network and retrieves vector graphics files over the network.” <i>Id.</i> at 10.
“vector graphics extension”	“[C]omputer software that processes vector graphics files.” <i>Id.</i>
“network application file”	“[C]omputer software that connects to and retrieves files over a network.” <i>Id.</i> at 11.
“vector graphics file”	“[A] file that comprises one or more vector objects.” <i>Id.</i>
“property defining a command to be performed in response to an event”	“[P]roperty defining an instruction to be carried out by computer software in response to a user.” <i>Id.</i> at 13.

Based on the record adduced during trial we see no reason to modify or further address the above constructions with the exception of “interactive vector object/vector object” and “property defining a command to be performed in response to an event,” which are discussed below.

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

3. “*interactive vector object/vector object*”

Patent Owner contends that the broadest reasonable interpretation of “interactive vector object” is slightly different than the construction adopted in the Decision to Institute. PO Resp. 11. In particular, Patent Owner contends that the broadest reasonable interpretation is “a computer software object that includes *as fields or methods* at least a mathematical description of a graphical image and one definition so that the graphical image responds to events.” *Id.* (emphasis added). Patent Owner also provides a construction for the similar term “vector object.” *Id.* at 17. In particular, Patent Owner contends that the broadest reasonable interpretation of “vector object” is “a computer software object that includes *as a field or method* at least a mathematical description of a graphical image.” *Id.* (emphasis added). Patent Owner contends that its proposed interpretations are consistent with the understanding of “those of skill in the art” and supports its contentions with the Declaration of Mr. Garry Kitchen. PO Resp. 11 (citing Ex. 2002 ¶¶ 47–48, 52–54).

Regarding “interactive vector object,” Petitioner contends “PO’s attempt to redefine the Board’s construction should be rejected because it is overly narrow and necessarily inconsistent with the claim language.” Pet. Reply 2 (citing Ex. 1012 ¶¶ 5–6). Petitioner asserts that Mr. Kitchen’s testimony is inconsistent with the claim language because “the ‘computer software object,’ on which he based his claim construction analysis, must be ‘the compiled code’ and ‘an instantiation of a class.’” *Id.* at 2–3 (citing Ex. 1011, 38:20–39:24). Petitioner points to the following claim recitation: “[a]n interactive vector object . . . operable to be downloaded over a network comprising: data operable to be downloaded to a client system.” *Id.* at 2.



IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

Regarding “vector object,” Petitioner similarly contends that Patent Owner proposes too narrow an interpretation. *Id.* at 6. In particular, Petitioner contends “[h]ere again, PO is relying upon an overly narrow construction-of-a-construction to import a new requirement for a ‘field or method’ as the mathematical description of the graphical image.” *Id.* (citing Ex. 1012 ¶ 22).<sup>5</sup>

The parties’ dispute pertains to the proper interpretation of “a computer software object” within our construction of “interactive vector object.” The ’854 Patent and ’732 Patent Specifications do not define “computer software object.” We, therefore, look to the dictionary definitions provided by Patent Owner. The dictionary definitions of “object” are useful in ascertaining the way in which one of ordinary skill in the art would use these claim terms. *Starhome GMBH v. AT&T Mobility LLC*, 743 F.3d 849, 856–57 (Fed. Cir. 2014).

We note that at least two dictionary definitions do not include either “fields” or “methods,” which are the terms that Patent Owner proposes to add for clarification. PO Resp. 11. In particular, Patent Owner submits dictionary definitions for “object” including the following: (1) “[a]n encapsulation of data and services that manipulate that data” (PO Resp. 12 (citing THE IEEE STANDARD DICTIONARY OF ELECTRICAL AND ELECTRONICS TERMS 784–85 (Jane Radatz et al. eds., 6th ed. 1996) (Ex. 2003))) and (2) “[i]n object oriented programming, a variable comprising both routines and data that is treated as a discrete entity” (*id.* (citing MICROSOFT PRESS COMPUTER DICTIONARY 337 (3d ed. 1997) (Ex. 2017))). We further note

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<sup>5</sup> During the hearing, Petitioner stated that an object has “data . . . [a]nd . . . functionality associated with it.” Tr. 65:11–16.

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

that Patent Owner provides a list of synonyms for “fields” and “methods,” which includes the terms used in the dictionary definitions. *Id.* at 13; *see also* Ex. 2002 ¶ 48 (Mr. Kitchen testifies “I note that synonyms such as ‘behaviors,’ ‘services,’ ‘procedures,’ ‘routines,’ and ‘functions’ are sometimes used for my preferred term, ‘methods’ and synonyms such as ‘variables[,]’ attributes[,]’ and ‘state’ are sometimes used for my preferred term ‘fields.’”). Although Mr. Kitchen describes “fields” and “methods,” as his “preferred” terms, he does not explain persuasively the basis for his preference, and he further states “[t]here is no substantive difference between the concepts.” Ex. 2002 ¶ 48.<sup>6</sup>

In accordance with the ’854 Patent, the invention may operate in a Windows operating system environment. Ex. 1001, 4:43–46. We, therefore, look to the definition provided by the *Microsoft Press Computer Dictionary* i.e., “[i]n object oriented programming, a variable comprising both routines and data that is treated as a discrete entity.” Ex. 2017, 337. This dictionary definition is consistent with the use of the term in the ’854 Patent and ’732 Patent Specifications. In particular, the ’854 Patent Specification states “an interactive vector object operable to be downloaded over a network may comprise *data* to render an image.” Ex. 1001, 1:44–46 (emphasis added). The ’854 Patent Specification also states, “[t]he vector object may include a property defining a *command to be performed* in response to an event.” *Id.* at 1:56–57 (emphasis added).

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<sup>6</sup> Additionally, Patent Owner indicated agreement with substituting synonyms it identified for “fields or methods” in its proposed construction. Tr. 50:22–51:6.

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

Although we look to the *Microsoft Press Computer Dictionary*, we note that the '854 Patent Specification indicates that the vector object should not be limited to a particular implementation or operating system. For example, the '854 Patent Specification states, “another technical advantage of the present invention includes providing device independent network graphics.” Ex. 1001, 2:29–30; *see also id.* at 12:16–19 (“It is intended that the present invention encompass such changes and modifications [to embodiments described] as fall within the scope of the appended claims.”)

In the Decision to Institute, we determined that “interactive vector object” means “a computer software object that includes at least a mathematic description of a graphical image and one definition so that the graphical image responds to events.” Inst. Dec. 8. We clarify our decision by determining that the broadest reasonable interpretation of “a computer software object” is “a variable comprising both routines and data that is treated as a discrete entity.” We further determine that “a computer software object” may be implemented in various programming languages, and routines are simply procedures or functions in that programming language (*see* Ex. 2002 ¶ 48). Additionally, we determine that the broadest reasonable interpretation of “vector object” is “a computer software object that includes at least a mathematical description of a graphical image.”

Patent Owner, additionally, contends that it “proposes including the reference to ‘fields or methods’ to preclude unreasonably broad applications of the term ‘computer software object’ that would encompass multiple separate and distinct computer software objects.” PO Resp. 11.<sup>7</sup> Mr.

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<sup>7</sup> During the hearing, Patent Owner indicated “we don’t dispute that it’s possible for one object to contain another object.” Tr. 52:15–16. Patent

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

Kitchen testifies “[t]he meaning of ‘computer software object’ . . . is captured in a broad range of technical dictionary definitions and papers” and notes portions of various definitions and papers. Ex. 2002 ¶ 47 (citing Exs. 2003, Ex. 2017, 2018, 2019, 2020, 2021, 2022, 2023); *see also id.* ¶ 53 (citing Ex. 2026). Petitioner disagrees and contends that Patent Owner “and its expert conveniently fail to address the many instances where those same exhibits describe ‘objects’ as including members that are defined outside of the object itself, members that are other objects or pointers to other objects, and members that are inherited from other objects.” Pet. Reply 5 (citing Ex. 1012 ¶¶ 13–21; Ex. 1011, 43:21–45:13).

Consistent with Petitioner’s contentions, exhibits submitted by Patent Owner describe that objects can include other objects. *See e.g.*, Ex. 2021, 8 (“We can construct objects of other objects.”); *see also* Ex. 2026 (“some objects, in turn, will also contain other objects.”) We, therefore, determine that in accordance with the broadest reasonable interpretations above, a computer software object can include or comprise another computer software object.

4. *“property defining a command to be performed in response to an event” and “active area associated with a command to be performed in response to an event”*

Each of claims 1, 10, 44, and 64 of the ’854 Patent recites “a property defining a command to be performed in response to an event.” Claim 1 of the ’732 Patent recites “the active area associated with a command to be performed in response to an event.” Patent Owner contends that the construction of “a property defining a command to be performed in response

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Owner, however, includes a condition in its statement. For the avoidance of doubt, we address Patent Owner’s contention.

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

to an event” in the Decision to Institute requires clarification. PO Resp. 16–17. Patent Owner further contends that Pesce does not disclose an “interactive vector object” or “vector object” containing the above-referenced recitations, as further limited by certain dependent claims. *See, e.g., id.* at 56. We consider Patent Owner’s request for slight clarification and also determine the broadest reasonable interpretation of “property defining” as recited in claims 1, 10, 44, and 64 of the ’854 Patent and “associated” as recited in claim 1 of the ’732 Patent to evaluate Patent Owner’s further contentions.

The ’854 Patent Specification does not provide a definition of “property defining.” The *IEEE Dictionary* sets forth plain and ordinary meanings of “property” as follows: “(1) [a] kind of responsibility that is an inherent or distinctive *characteristic* or trait . . . (2) [a] documenting *characteristic*.” INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, THE AUTHORITATIVE DICTIONARY OF IEEE STANDARD TERMS 879 (7th ed., IEEE Press 2000) (emphasis added) (Ex. 3003). The *IEEE Dictionary* sets forth a plain and ordinary meaning of “data definition” as follows: “[a] *description* of the format, structure and properties of a data item, data element, or data structure.” *Id.* at 270. These definitions are consistent with the Specification, which provides an exemplary dialog box for defining a property (Ex. 1001, 2:54–55) including a “Value” to be entered by a user for describing a characteristic of the instructions to be performed, e.g., “StatusLine I am a star” and two names of events including “OnMouseLeave,” and “OnMouseEnter” (*id.* at Fig. 4). The ’854 Patent indicates that the value “StatusLine” causes processing of instructions to display text in the browser status bar. *Id.* at 5:23–24. As illustrated in

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

Figure 4 of the '854 Patent, simply specifying the value, i.e., "StatusLine," is sufficient, without providing all instructions needed to display the text.

The '732 Patent Specification does not provide a definition of "associated." The *IEEE Dictionary* sets forth a plain and ordinary meaning of "association" as follows: "[i]n data management, a *relationship* established in a data model to represent a connection between entities that is not reflected solely by the attributes inherent in the entities." THE AUTHORITATIVE DICTIONARY OF IEEE STANDARD TERMS 56 (emphasis added). This definition is consistent with the Specification, which includes the above-referenced example of a dialog box used to establish a relationship between an image and a command. IPR2014-00534, Ex. 1001, Fig. 4.

Regarding Patent Owner's proposed clarification, Patent Owner contends that "user" should be replaced with "user action" for clarity. PO Resp. 17. The Specification of the '854 patent provides examples of events that initiate a command including, "On Mouse Enter, On Mouse Leave," "On Mouse Down," "On Mouse Up," and "On Load." Ex. 1001, 5:36–37. The first four of these exemplary events is initiated in response to a user's interaction with a mouse. *Id.* at 5:37–46. The "On-Load" event "may be initiated when the vector graphics file 52 containing the vector object 56 is open." *Id.* at 5:46–48.

Accordingly, we determine that the broadest reasonable interpretation of "property defining a command to be performed in response to an event" is "characteristic describing an instruction to be carried out by computer software in response to a user action." We further determine that the property may be specified by a simple value that describes the command, e.g., "StatusLine" (Ex. 1001, Fig. 4), and need not provide all instructions to

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

execute the command, e.g., to display the text. Additionally, we determine that the broadest reasonable interpretation of “the active area associated with a command to be performed in response to an event” is “the active area is related to an instruction to be carried out by computer software in response to a user action.”

*B. Anticipation by Pesce*

For the reasons given below, after consideration of the Petition, the arguments in the Patent Owner Response, and the evidence cited therein, we conclude that Petitioner has shown, by a preponderance of the evidence, that each of the challenged claims of the '854 Patent and the '732 Patent is unpatentable as anticipated by Pesce.

*1. Pesce*

Pesce describes Virtual Reality Modeling Language (VRML). Ex. 1004, xxv. VRML is a language for specifying aspects of virtual world display, interaction, and internetworking. *Id.* at 331. The virtual worlds are networked via the Internet and hyperlinked with the World Wide Web. *Id.*

The first step in viewing a VRML document is retrieving the document. Ex. 1004, 46. Pesce describes a VRML browser that sends a request for the document to a Web Server. *Id.* Figure 11.1 of Pesce is reproduced below.

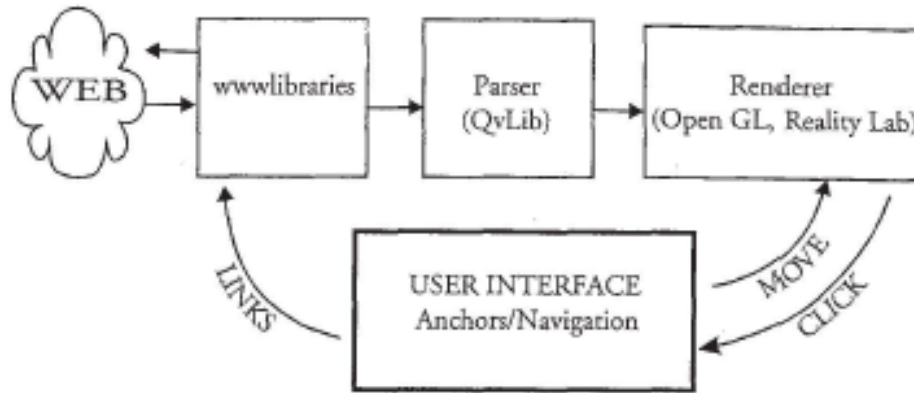


Figure 11.1 illustrates the architecture of a prototypical VRML browser.

As illustrated in Figure 11.1, the VRML browser provides interactive graphics. Ex. 1004, 277. The Web server that receives the request for the VRML document attempts to fulfill the request with a reply. *Id.* at 46. The reply is sent back to the VRML browser. *Id.* After the document has been received by the VRML browser, it is parsed. *Id.* Then a renderer uses the parsed description to create visible representations of the objects described in the VRML document and displays them. *Id.* at 46–47.

The objects in a VRML document are known as nodes. Ex. 1004, 105. A node has a type and one or more fields. *Id.* at 106. Exemplary node types include Sphere, Cube, WWWInline, and Separator. *Id.* Fields are places for a node to store information specific to itself. *Id.* For example, a sphere node has a radius field, which supplies a value for the radius of the Sphere. *Id.* The entire list of nodes in the VRML document is a scene graph. *Id.*

## 2. Petitioner's Contentions

We have reviewed Petitioner's anticipation contentions, supporting evidence, including the Declaration of Dr. Anselmo Lastra (Ex. 1003), and



IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

the detailed claim charts, which read all elements of the challenged claims of the '854 Patent onto Pesce. For instance, Petitioner asserts that Pesce discloses “data operable to be downloaded to a client system . . . to render an image,” as recited in some of the challenged claims, by describing the operation of the VRML browser. *See e.g.*, Pet. 22 (citing Ex. 1004, 46–47; Ex. 1003 ¶ 33). Pesce describes a Web server fulfilling a request with a VRML document. Ex. 1004, 46. According to Pesce, the received VRML document is parsed and then a renderer creates visible representations of the objects described in the document and displays them. Ex. 1004, 46–47.

Petitioner additionally asserts that Pesce discloses the “active area defined by the vector object,” as recited in the challenged claims, by describing linking the Sun object to a WWWAnchor node. *See e.g.*, Pet. 23 (citing Ex. 1004, 117–18, 120; Ex. 1003 ¶ 35). Pesce describes linking the Sun object to `www.w3.org` using the WWWAnchor group node. Ex. 1004, 117–18. Pesce also describes that a VRML browser indicates to a user that the Sun object is linked by displaying the Sun object in bright orange when the cursor is over it. *Id.* at 120.

Petitioner further asserts that Pesce discloses the vector object comprising a “property,” as recited in some of the challenged claims, by describing linking objects to the World Wide Web, for example, by specifying a URL to be linked to the WWWAnchor node in a name field. Pet. 23 (citing Ex. 1004, 117; Ex. 1003 ¶ 36). For the reasons given in the Decision to Institute, we determine that a “command” is an “instruction to be carried out by computer software.” Inst. Dec. 12–13. As we noted in the Decision to Institute, our determination is based in part on exemplary commands provided in the '854 Patent Specification including, “Jump.” *Id.*

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

The “Jump” command “may instruct a browser to load and display a newly specified URL.” Ex. 1001, 5:19–21. Pesce explains that if a user clicks on the Sun, a message will be sent to go to the page <http://www.w3.org/>. Ex. 1004, 120.

Petitioner additionally specifies where other recited features of the independent claims and the recited features of each of the challenged dependent claims can be found in Pesce. Pet. 13–15, 21–37; IPR2014-00534 Pet. 11–13, 15–26. For example, Petitioner asserts that Pesce discloses a command operable to alter the image of the vector object, as recited in claims 5, 14, and 69 of the ’854 Patent, by describing linked objects turning orange when a mouse is put over them and using a right mouse button for object manipulation. Pet. 25, 29, 37 (citing Ex. 1004, 68, 78; Ex. 1003 ¶¶ 41, 47, 61). Petitioner further asserts that Pesce discloses a command operable to recolor the image of the vector object, as recited in claims 7, 16, and 71 of the ’854 Patent, by describing linked objects turning orange when a mouse is put over them. Pet. 25, 29–30, 37 (citing Ex. 1004, 68, 120; Ex. 1003 ¶¶ 42, 47, 61).

3. *Patent Owner’s contentions regarding “interactive vector object”*

Patent Owner contends that Pesce cannot anticipate any of the challenged claims because “**it does not disclose an ‘interactive vector object’ or ‘vector object’ that contains all of the claim elements.**” PO Resp. 26. Patent Owner specifically refers to a requirement that the computer software object “include[s] at least vector graphics data (i.e., ‘a mathematical description of a graphical image’) and one definition so that the graphical image responds to events.” *Id.* at 26. Patent Owner states

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

“[w]hile not all claims use exactly the same language, this requirement is part of each claim.” *Id.* at 26–27; *see also* IPR2014-00534 PO Resp. 26–27 (Patent Owner makes the same assertion regarding the challenged claims of the ’732 Patent).

For the reasons given above, we determine that each of “interactive vector object” and “vector object” is “a computer software object that includes” particular data. We also determine that the broadest reasonable interpretation of “a computer software object” is “a variable comprising both routines and data that is treated as a discrete entity.”

Patent Owner’s contention (PO Resp. 29) relates to Petitioner’s identification of a group node, referred to as “**WWWAnchor**” (Pet. 21–24). We first consider whether WWWAnchor is a variable comprising both routines and data. Pesce states that “WWWAnchor has . . . the name field[, which] specifies the URL of the anchor.” Ex. 1004, 117. Additionally, Pesce indicates that WWWAnchor comprises additional data i.e., “all nodes *within* **WWWAnchor** node are anchored to the same *Uniform Resource Locator* (URL) within the Web.” *Id.* (emphasis added). Furthermore, Pesce uses the terms “node” and “object” interchangeably stating, “[a] VRML document consists of a list of *objects, known as nodes.*” *Id.* at 105 (emphasis added). Pesce also indicates that WWWAnchor is a variable by stating “[y]ou can create an anchor to anything in the Web.” *Id.*

Patent Owner contends that “WWWAnchor cannot by itself anticipate, and . . . the combination of it and a shape node does not anticipate either.” PO Resp. 33. Patent Owner contends that WWWAnchor “does not by itself include vector graphics data.” *Id.* at 34–35 (citing Ex. 1004, 117, 120–22; Ex. 2002 ¶¶ 101–115). Patent Owner’s contention

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

pertains to whether the mathematical description of a graphical image is included in the computer software object.

We, therefore, turn to the question of whether WWWAnchor includes a mathematical description of a graphical image. As noted above, WWWAnchor is “a group” node or object. Ex. 1004, 117. Pesce states that “all of the nodes *within* the **WWWAnchor** node are anchored to the same *Uniform Resource Locator* (URL) within the Web.” *Id.* (emphasis added). Pesce also states, “we’ll create a **WWWAnchor** node that *contains* only the **Sphere** node used to define the Sun.” *Id.* at 118 (emphasis added). In the exemplary code in Pesce, following the definition of the URL for WWWAnchor, the comments indicate “*Inside* the anchor, because WWWAnchor is a group node.” *Id.* (emphasis added). Immediately following this comment is “Sphere {radius 10 #Big Sun}.” *Id.* at 119. Patent Owner acknowledges that shape nodes, such as the Sphere node “clear the first hurdle contained in the constructions of ‘interactive vector object’ and ‘vector object’ . . . [i.e.,] at least a mathematical description of a graphical image.” PO Resp. 30.

Patent Owner contends, however, that the example above “does not anticipate the challenged claims because writing a Sphere node within the braces of the WWWAnchor group node in VRML does not yield a single computer software object containing all of the elements as recited in the claims.” PO Resp. 41–42. Contrary to Patent Owner’s contention, in the portions of Pesce cited by Petitioner, Pesce describes the relationship between WWWAnchor and the Sphere node used to define the sun using the following terms: “within” (Ex. 1004, 117), “contains” (*id.* at 118), and “[i]nside” (*id.* at 118–19). Patent Owner refers to a sentence of Pesce

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

describing that a radius is specific to a Sphere node (PO Resp. 42), but as described in Pesce the Sphere node, i.e., the Sun, is included within WWWAnchor.

Patent Owner additionally contends, “[t]hose of skill in the art understand that the contents of a computer software object include its fields and its methods, and limiting the boundaries of an object to only what falls within one of those categories is essential to recognizing the discrete and self-contained nature of computer software objects.” PO Resp. 47 (citing Ex. 2002 ¶¶ 47–48, 51–56, 111–112; *supra* at 11–15). We, therefore, turn to the requirement that a computer software object be treated as a discrete entity. In the example above, because the Sun is written “[i]nside the anchor” (Ex. 1004, 118–19), “[i]f you click on the Sun in WebSpace, it will send a message to the HTML browser to go to the page <http://www.w3.org/>” (*id.* at 120). As a result, “**WWWAnchor** node that contains . . . the Sphere node used to define the Sun” (*id.* at 118) is treated as a discrete entity.

Patent Owner additionally points to a default file format for WWWAnchor. PO Resp. 35. Patent Owner contends “as Mr. Kitchen explains in his declaration, one can write a VRML document that includes a WWWAnchor group node without any shape nodes inside its braces.” PO Resp. 36 (citing Ex. 2002 ¶ 131). Regardless of whether a default format requires inclusion of a Sphere node, Petitioner has pointed to the description in Pesce of a WWWAnchor node that contains a Sphere node. Pet. 23 (citing Ex. 1004, 118). That Mr. Kitchen can write alternate code does not negate the exemplary code in Pesce in which a WWWAnchor node “contains” the Sphere node (Ex. 1004, 118).

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

For the reasons given, we determine that Petitioner has shown, by a preponderance of the evidence, that Pesce discloses “interactive vector object,” “vector object,” and similar recitations identified by Patent Owner (PO Resp. 28–29) in the challenged claims.

*4. Patent Owner’s contentions regarding “a property”*

Patent Owner additionally contends “the Petition never identifies a ‘computer software object’ for which WWWAnchor is a ‘property.’” PO Resp. 34. As Patent Owner acknowledges, the Petition states “[t]he ‘**WWWAnchor** node that anchors another node to a URL’ corresponds to the claimed ‘property.’” *Id.* (citing Pet. 24). Patent Owner, however, contends that the mapping in the Decision to Institute is “substantially different” from that in the Petition. *Id.*

Each of claims 1, 10, 44, and 64 of the ’854 Patent recites “a property defining a command to be performed in response to an event within the active area of the vector object.” The challenged claims of the ’732 Patent do not recite “a property.” The excerpt of the claim chart in the Petition corresponding to the disputed element is reproduced below.

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

Pesce discloses that the interactive vector object includes a property defining the command to be performed in response to the event within the active area of the vector object. (GOOGLE1003 at ¶ 36). For example, Pesce discloses that “nodes within the **WWWAnchor** node are anchored to the same Uniform Resource Locator (URL) within the Web.” (GOOGLE1004 at p. 117). “**WWWAnchor** has a number of fields, the most important of which is the **name** field. It specifies the URL of the anchor.” (*Id.*). Pesce provides an example of a portion of a VRML document for linking the Sun to www.w3.org, as shown below:

```
# The WWWAnchor node is a group node
# This means that all objects within it are linked
↳with the anchor's URL
# We want to link the Sun, so the Sun's Sphere node
↳goes inside of it.
WWWAnchor {
    name "http://www.w3.org/" # The root URL of the
↳World Wide Web

    # Inside the anchor, because WWWAnchor is a
↳group node

    Sphere {
        radius 10 # Big Sun
    }
}
```

(*Id.* at p. 118-119). The “WWWAnchor node that anchors another node to a URL” corresponds to the claimed “property.” (GOOGLE1003 at ¶ 36).

Pet. 23–24.

Petitioner identifies the field within WWWAnchor that specifies the URL of the anchor and includes an excerpt of code from Pesce that links WWWAnchor to the root URL of the Web. *Id.* (citing Ex. 1004, 117–119). Pesce describes that if a user clicks on the Sun, a message will be sent to go to the page http://www.w3.org. Ex. 1004, 120. We, therefore, determine that Petitioner has shown, by a preponderance of the evidence in the Petition, that Pesce discloses the property recited in claims 1, 10, 44, and 64.

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

5. *Patent Owner's contentions regarding "location of the vector object"*

Patent Owner provides further contentions regarding "the data further comprising . . . a location of the vector object," as recited in claims 3, 12, and 57 of the '854 Patent, and commensurately recited in claim 66 of the '854 Patent and claims 3 and 4 of the '732 Patent. Petitioner points to portions of Pesce describing the "**Transform** node." Pet. 25 (citing Ex. 1004, 111). In the example referred to by Petitioner, Pesce states "[t]he **Transform** node changes the position, orientation, size, and center of any nodes that follow it in a group." Ex. 1004, 11.

Patent Owner's contentions are similar to those discussed above with respect to "interactive vector object." Specifically, Patent Owner contends "Petitioners call on a *separate object* (Transform)," without persuasively discussing disclosure in Pesce identified by Petitioner. PO Resp. 53–56. For the reasons discussed above with respect to "interactive vector object" and similar limitations, we are not persuaded.

Patent Owner also relies on testimony by Petitioner's Declarant, Dr. Lastra, regarding a snippet of code (Ex. 2012) that Patent Owner showed Dr. Lastra during his deposition. PO Resp. 55–56. Patent Owner's snippet of code, however, is not the same as the disclosure pointed to by Petitioner. As disclosed by Pesce, instructions executed by code depend on other code: "[a]ny nodes within a group node all adopt the group node's frame of reference. The Separator node, at its essence, tells us when and where a frame of reference exists." Ex. 1004, 111. The snippet of code relied on by Patent Owner (Ex. 2012) is not the same as the code Petitioner points to in Pesce because it does not include, for example, the Sphere node used to define the Sun, with a radius of 10 (Ex. 1004, 119). Transform is used to



IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

position the node defining the Earth with respect to the node defining the Sun, in the example described in Pesce. *Id.* at 111. As a result, we are not persuaded by Patent Owner’s contentions pertaining to Dr. Lastra’s testimony.

For the reasons given, we determine that Petitioner has shown by a preponderance of the evidence that Pesce discloses “the data further comprising . . . a location of the vector object,” as recited in claims 3, 12, and 57 of the ’854 Patent, and commensurately recited in claim 66 of the ’854 Patent and claims 3 and 4 of the ’732 Patent.

6. *Patent Owner’s contentions regarding “operable to alter an image” and “operable to recolor the image”*

Patent Owner also provides further contentions regarding “the command operable to alter the image of the vector object on the client system,” as recited in claims 5 and 14 of the ’854 Patent and claim 5 of the ’732 Patent, and as commensurately recited in claim 69 of the ’854 Patent and “operable to recolor the image,” as recited in claims 7 and 16, and as commensurately recited in claim 71 of the ’854 Patent. For these limitations, Petitioner points to Pesce’s description that “linked objects turn orange when the mouse is put over them.” Pet. 25 (citing Ex. 1004, 68). For example, “Try this [place cursor over it] with example eight—you’ll see the Sun turn orange!” Ex. 1004, 120.

Patent Owner contends that Petitioner’s analysis is flawed because “any response to a user placing the cursor over the image is defined by the *VRML browser* and not by the *vector object*, as the claims require.” PO Resp. 57. For the reasons discussed above with respect to claim construction, we determine that the property may be specified by a simple

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

value that describes the command, e.g., “StatusLine,” in the ’854 Patent Specification (Ex. 1001, Fig. 4), and need not provide all instructions to execute the command, e.g., to display the text. Accordingly, that the browser software includes certain instructions that effect the display does not negate the disclosure in Pesce of “an interactive vector object” or “vector object” comprising “a property” discussed above.

Additionally, because Pesce describes “to link our Sun—and just our Sun—into the Web, we’ll create a **WWWAnchor** node that contains only the Sphere node used to define the Sun” (Ex. 1004, 118), we determine that Pesce discloses the association recited in claim 1, i.e., the link. Accordingly, we determine that Petitioner has shown, by a preponderance of the evidence, that Pesce discloses “the command operable to alter the image of the vector object on the client system,” as recited in claims 5 and 14 of the ’854 Patent and claim 5 of the ’732 Patent, and as commensurately recited in claim 69 of the ’854 Patent and “operable to recolor the image,” as recited in claims 7 and 16, and as commensurately recited in claim 71 of the ’854 Patent.

### *7. Conclusion*

For the reasons given, we conclude that Petitioner has shown by a preponderance of the evidence that the challenged claims of the ’854 Patent and the ’732 Patent are anticipated by Pesce.

## III. CONCLUSION

We conclude that Petitioner has demonstrated by a preponderance of the evidence that claims 1–3, 5, 7, 10–12, 14, 16, 19, 44, 54–57, 59, 61–66, 68, 69, and 71 of the ’854 Patent and claims 1–5, 8, 9, 12, 36, and 42 of the ’732 Patent are unpatentable, under 35 U.S.C. § 102, as anticipated by

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

Pesce. This is a Final Written Decision of the Board under  
35 U.S.C. § 318(a).

#### IV. ORDER

For the reasons given, it is:

ORDERED that claims 1–3, 5, 7, 10–12, 14, 16, 19, 44, 54–57, 59, 61–66, 68, 69, and 71 of U.S. Patent No. 6,057,854 are determined by a preponderance of the evidence to be *unpatentable*;

FURTHER ORDERED that claims 1–5, 8, 9, 12, 36, and 42 of U.S. Patent No. 6,552,732 are determined by a preponderance of the evidence to be *unpatentable*; and

FURTHER ORDERED, because this is a Final Written Decision, parties to the proceedings seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2014-00533 (Patent 6,057,854)  
IPR2014-00534 (Patent 6,552,732 B1)

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