

**USPTO**

Control No.: 95/000,635 ) Confirmation No.: 4626  
 ) Art No.: 3992  
In re: Patent of Rorabaugh *et al.* ) Examiner: KOSOWSKI, Alexander  
 )  
U.S. Patent Nos.: 7,831,926 )  
 )  
Issue Date: 11/09/2010 )  
Filing Date: 04/21/2007 )  
Title: Scalable Display of Internet )  
Content on Mobile Devices )

AND

Control No.: 95/000,634 ) Confirmation No.: 8853  
 ) Art No.: 3992  
In re: Patent of Rorabaugh *et al.* ) Examiner: STEELMAN, Mary J  
 )  
U.S. Patent Nos.: 7,461,353 )  
 )  
Issue Date: 12/02/2008 )  
Filing Date: 01/28/2005 )  
Title: Scalable Display of Internet )  
Content on Mobile Devices )

**Declaration of Jack D. Grimes, Ph.D.**

I, Jack D. Grimes, Ph.D., declare:

**I. INTRODUCTION**

1. My name is Jack D. Grimes, and I reside at 5025 Wine Cellar Drive, Sparks, NV. I am an independent consultant. I have prepared this Declaration for consideration by the USPTO. I am over eighteen years of age and I would otherwise be competent to testify as to the matters set forth herein if I am called upon to do so.

2. I have written this Declaration at the request of Apple Computer (herein “the Third Party Requester”). This declaration was written in support of the Third Party Requester’s Comments to the Office Action dated October 1, 2011 and in regard to the Patent Owner’s Response dated December 21, 2011.

**EXHIBIT**  
Petitioner - Motorola  
**PX 1021**

3. In forming my opinions, I rely on my knowledge and experience in the field and on documents and information referenced in this Declaration.

## II. BACKGROUND AND EXPERTISE

4. I earned B.S. and M.S. degrees in Electrical Engineering, and a Ph.D. degree in Electrical Engineering (with a minor in Computer Science), all from Iowa State University. I also earned an M.S. degree in Experimental Psychology from the University of Oregon. I have been active in several professional societies and have worked in the computer and electronics field for over forty (40) years. Details of my education and work experience are set forth in my *curriculum vitae*, which is attached as Appendix A.

5. I have worked in the area of computer graphics and video systems and consider myself to be at least a person of ordinary skill in the art.

6. I have been retained by Apple Computer as an expert for these reexamination proceedings. No part of my compensation is dependent upon the outcome of these reexamination proceedings or any issue in it.

## III. INFORMATION CONSIDERED

7. In forming my opinions, in addition to my knowledge and experience, I have considered the following documents and things that I have obtained, or that have been provided to me:

- a. U.S. Patent No. 7,831,926 (herein “ ’926 patent”);
- b. U.S. Patent No. 7,461,353 (herein “ ’353 patent”);
- c. File history for the ’926 patent and for the ’353 Patent;
- d. *Inter Partes* Request for Reexamination of the ’926 patent (hereinafter “the ’926 *Inter Partes* request”) and related file history;
- e. *Inter Partes* Request for Reexamination of the ’353 patent (hereinafter “the ’353 *Inter Partes* request”) and related file history;
- f. The Pad++ references cited in the ’926 *Inter Partes* request and the ’353 *Inter Partes* request;
- g. The JP ’169 reference cited in the ’926 *Inter Partes* request and the ’353 *Inter Partes* request;
- h. The Pad++ Reference Manual Version 0.2.7 (herein “Pad++ Reference Manual”);
- i. The Pad++ Programmer’s Guide version 0.2.7 (herein “Pad++ Programmer’s Guide”);
- j. A Brief Tour Through Pad++, published April 1997 (herein “Pad++ Brief Tour”);
- k. The Universal Encyclopedia of Mathematics, ©1964;

1. The SVF references - Specification for the Simple Vector Format v1.1 (herein “SVF 1.1”); Specification for Simple Vector Format v2.0 (herein “SVF 2.0”); Changes to SVF (“SVF Changes”); and
- m. Other references cited herein.

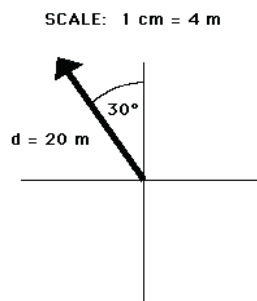
#### IV. PRIOR ART REFERENCES

##### A. Background of Vectors

8. A vector quantity is a quantity that is fully described by both magnitude and direction. That is, vector quantities are not fully described unless both magnitude and direction are listed.

[<http://www.physicsclassroom.com/class/vectors/u311a.cfm>].

9. Vector quantities are often represented by scaled vector diagrams. Vector diagrams depict a vector by use of an arrow drawn to scale in a specific direction. That is, the arrow has a head and a tail.



[<http://www.physicsclassroom.com/class/vectors/u311a.cfm>].

10. The type of “vectors” described in the ’353 and the ’926 patent are “bound” vectors.

[FIGS. 4C, 4D, 4G, ’353 and the ’926 patent].

11. “A vector whose point of origin is fixed at a definite point is called a bound vector. In particular, so-called ‘position vectors’ are bound vectors, their initial positions being bound to the point of origin of the coordinate system. A position vector has as its components the coordinates of its end-point. The vectors whose points of origin are at the origin of the coordinate system and whose end-points are at the unit-points on the axes are called the unit coordinate vectors.” [pp. 484-89, *The Universal Encyclopedia of Mathematics*, ©1964].

12. In both the ’353 and the ’926 patent, the vectors are referenced to a “point of origin,” and have the coordinates of their end points as the components of the vectors. Their points of origin are at the origin of the coordinate system (e.g., the upper left corner of a webpage).

## **B. Pad++ prior art references**

13. In reviewing the Pad++ documentation, I found that the Pad++ references teach the claims of the '353 and '926 patent. Because of the technical terminology used in some of the Pad++ references, I am providing a brief introduction to Pad++ for purposes of clarification.

14. In preparation for writing my declaration, I found several additional prior art documents that were not previously identified in the *Inter Partes* Reexamination Request but provide a description of the basic structure of creating and locating object and the relation of the Pad++ references to the '353 patent and the '926 patent: Pad++ Programmer's Guide (Version 0.2.7) published June 10, 1996; Pad++ Reference Manual published October 2, 1996; A Brief Tour Through Pad++; and A Zooming Web Browser published April 1997.

15. These additional references describe the same system as the Pad++ references of record but provide additional information that the Examiner may find helpful to understand that terminology used in the Pad++ references of record.

### **1. Overview of the Terminology Used in the Pad++ references**

16. Pad++ uses the term "surface" for the graphical area where objects (called items) are created and rendered for viewing.

17. The default origin of the surface is at the center of the "surface."

18. The default "surface" is 400x400 pixels and the default units for coordinates are pixels.

19. Objects are created in the "surface" and located at a "place."

20. A "place" is a location for the object. Some objects (like a rectangle, for example) have a place that is determined by where the object is drawn and its size. Other objects, like text, have a location determined by where the lower left corner of an upper case character is drawn.

21. Objects are placed, or located, relative to an "anchor" of the object. This "anchor" provides additional flexibility for the programmer. For example, the "anchor" has a default location on a rectangle object and on an image (and many others) of "center." Other places for the "anchor" can be assigned, for example the top center (n, for north), the lower left corner (sw for southwest), and so forth. The default "anchor" for text is the lower left corner (sw) of an upper case letter like the "H" in "Hello World."

22. The "place" for the object is the location of the "anchor" (default center of a rectangle) relative to the origin of the coordinate system (e.g., center of the surface).

## 2. Pad++ is Vector-based

23. The Office Action issued in the Reexamination of the '926 patent (herein "the '926 Office Action") states at page 10 that the Pad++ references do not disclose a vector from a primary/page datum to an object datum, but I disagree with the Office Action.

24. The Pad++ references disclose a vector from a primary/page datum (an origin) to an object datum (an anchor of an object). This point is further clarified in light of the Pad++ Programmer's Guide and the Pad++ Reference Manual.

25. For example, the Examiner acknowledges, and I agree, that the Pad++ references teach view and object coordinates inferred relative to a primary/page datum of (0,0), that is, from an origin.

26. Pad++ describes the default origin as the center of the screen. [p. 1129, Bederson-4; *see also* p. 4, Pad++ Programmer's Guide]. However, in other examples, the Pad++ references describe the origin elsewhere: "0.0 [the origin (0,0)] represents the left or bottom side of the window." [p. 22, Pad++ Reference Manual].

27. Similarly in the '926 patent and the '353 patent, the origin is "a 0,0 datum point corresponding to the upper left hand corner of the frame the object belongs to." [C18:9-12, '926 patent; *see also* C:181:1-11, '353 patent]. That is, the '926 patent and the '353 patent, provide an example that the "rendered page datum 262 is defined to be coincident with the upper left hand corner of the display frame of the rendered page for the web page; [C17:47-49, '926 patent: C:17:47-50, '353 patent] and "The page datum point corresponds to the upper left hand corner of the display frame and is assigned an XY value 266 of 0,0." [C18:1-3, '926 patent: C:18:1-3, '353 patent].

28. Thus, similar to the '926 patent and the '353 patent, the Pad++ references define the primary datum point or the page datum point as the origin of the surface, which can be the center of the screen, the left bottom side of the screen (i.e., the bottom left corner of the screen), or the upper left corner of the screen, depending on the programmer's designation of the origin.

29. Since the Pad++ references define objections and the transformation of objects with respect to a coordinate system (e.g., using XY coordinates relative to an origin, which gives the magnitude and direction that defines vectors), a person of ordinary skill in the art would understand Pad++ to be a vector-based system.

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