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(54) Method and apparatus for generating a set of signals representing a curve.

(57) Disclosed is a method and system of encoding data representing knots on an outline loop defined relative to a coordinate plane, for producing a display image of said outline and decoding responsive to the interrelationship of said knots on said outline loop, and imaging said outline loop responsive to said decoded data involving selecting sets of coordinates on said outline loop, to represent said knots, establishing a successive of said knots, encoding said knots in a data order indicative of said knot order. In the method a complete information set is encoded of data indicative of the coordinate distances and interknot angles between adjacent knots. The relative positions of successive knots are compared to at least a first interknot criterion responsive to the comparing. When compared, the method further comprises producing a first indication that a set of said successive knots is within said criterion, or ii) producing a second indication that a set of said successive knots is outside said criterion, and i) responsive to said first indication imaging said outline loop in the form of a smooth continuous curve, or ii) responsive to said second indication, imaging said outline loop in the form of a straight line, between said set of successive knots. Further disclosed is the encoded data representing the knots on an outline defined relative to a coordinate plane and decoded for use in a display process to produce images of said outlines represented by said encoded data involving selecting sets of coordinates on said outline, to represent said knots, establishing a successive order of said knots, encoding said knots in a data order indicative of said knot order, by encoding a complete information set of data providing a control code indicative of either i) the coordinate locations of said knots or ii) a knot's direction relative to others of said knots or iii) a predetermined shape of said outline between a pair of said knots or iv) data indicative of the shape of said outline at a knot, or v) providing data indicative of the coordinate distances between adjacent knots decoding said complete information sets in a decoding order related to said data order, responsive to said complete information set being

indicative of the coordinate distances between adjacent knots, producing an image of a smooth continuous curved outline or a straight line between said adjacent knots or responsive to said complete information sets being indicative of a control code as set forth in i), ii), iii), or iv), producing an image of a smooth continuous outline or a straight line according to the said coordinate locations of said knots relative to adjacent knots in said successive knot order or producing an image of said outline being smooth at respective knots or being sharp and forming cusps at respective knots.

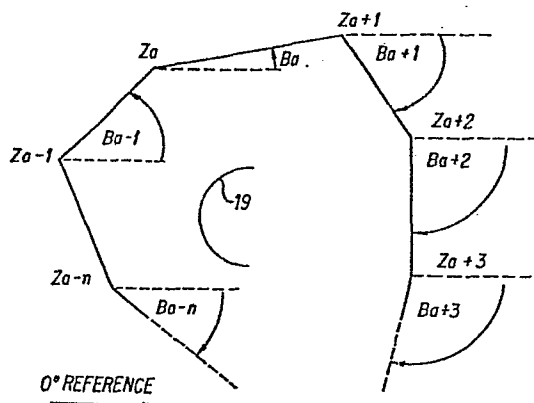


FIG. 1a



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	COMPUTER, vol. 17, no. 5, May 1984, pages 40-48, IEEE, Long Beach, California, US; J. FLOWERS: "Digital type manufacture: an interactive approach" * Page 43, left-hand column, line 6 - page 47, left-hand column, line 5 *	1	B 41 B 19/00 B 41 B 19/01 G 09 G 1/14
A	Idem	17	
A	WO-A-8 302 179 (DICOMED CORP.) * Figures 4-13; claims 1-5 *	1, 17	
D, A	US-A-4 199 815 (KYTE et al.) * Figures 1-11; column 6, line 27 - column 14, line 36; column 16, line 40 - column 17, line 15 *	1, 4, 17	TECHNICAL FIELDS SEARCHED (Int. Cl.4) B 41 B G 09 G G 06 F
A	US-A-4 331 955 (HANSEN)		
D, A	US-A-4 029 947 (EVANS et al.)		
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 10-07-1987	Examiner GYSEN L.A.D.
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			