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- (71) Applicant: LIFEF/X NETWORKS, INC. [US/US]; Building N1, 153 Needham Street, Newton, MA 02464 (US).
- (72) Inventors: ROSENBLATT, Michael, S.; 331 Dudley Road, Newton, MA 02459 (US). SALHANY, Lucille, S.; 36 Strawberry Hill Road, Dover, MA 02030 (US). GUTTENDORF, Richard; 1735 Elk Forest Road, Elkton, MD 21921 (US). LAFONTAINE, Serge; 6 Mill Street Ext., Lincoln, MA 01773 (US).

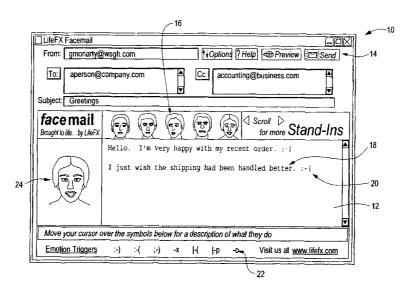
- (74) Agents: MORIARTY, Gordon, R. et al.; Weingarten. Schurgin, Gagnebin & Lebovici LLP, Ten Post Office Square, Boston, MA 02109 (US).
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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

[Continued on next page]

(54) Title: VIRTUAL REPRESENTATIVES FOR USE AS COMMUNICATIONS TOOLS



(57) Abstract: A system and method for enabling the use of photo-realistic, three-dimensional virtual representatives in a variety of communications settings is disclosed. A first module is employed for selecting a virtual representative to be used for communicating with a user, for defining text to be voiced by the selected virtual representative, and for inserting emotion cues (20) into that text. A second module responds to data from the first module by generating an image (16) of the virtual representative, then controls changes in the image in accordance with the text to be voiced and the corresponding emotion cues. A third module is employed for defining virtual representatives and the response of virtual representatives to emotion cues associated with text to be voiced. The modularity of the presently disclosed invention lends itself to the integration into a variety of settings, including Web pages, email and PC games.



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Documentation	on searched other than minimum documentation to the	extent that such documents are included in	n the fields searched
	ta base consulted during the international search (name ontinuation Sheet	of data base and, where practicable, sear	ch terms used)
C. DOC	UMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where ap	propriate, of the relevant passages	Relevant to claim No.
Y,P	US 6,144,388 A (BORNSTEIN) 07 NOVEMBER, col. 18, lines 31-39; col. 14, lines 15-52; col. 15, lir col. 20, line 10).		1-6
Y	US 5,748,191 A (Rozak et al.) 05 May 1998, see en	tire document.	1-6
Y	Microsoft Wold 2000, Daryl Lucas, 1987 Microsoft	1-6	
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	documents are listed in the continuation of Box C.	See patent family annex.	
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