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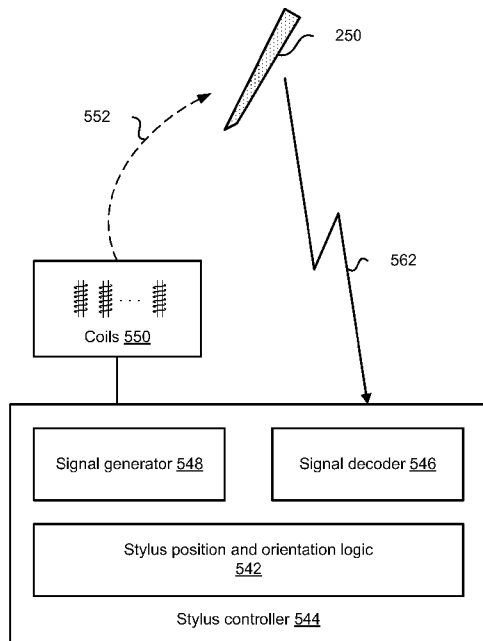
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[Continued on next page]

(54) Title: ELECTROMAGNETIC 3D STYLUS



Stylus system 540

FIG. 5A

(57) Abstract: A stylus system and method for determining the three-dimensional position and orientation of a stylus operating within a volume located above a surface of a display device is described. In some embodiments, the stylus system includes a stylus and a display device. The stylus senses one or more magnetic fields generated from a set of transmitting coils associated with the display device and transmits sensing information over an RF channel to a receiver in the display device. The display device determines the three-dimensional position of the stylus by applying a cell-based position reconstruction technique that compares the received sensing information with predetermined magnetic field values associated with one or more predetermined regions located above the surface of the display device. The cell-based position reconstruction technique accommodates magnetic field distortions due to the presence of conductive elements within or near the display device.

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EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU,
LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,
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A. CLASSIFICATION OF SUBJECT MATTER**G06F 3/03(2006.01)i, G06F 3/046(2006.01)i, G06F 3/033(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: stylus, pen, location, position, electric, magnetic, field

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2002-373051 A (COMMISSARIAT A L'ENERGIE ATOMIQUE) 26 December 2002 See abstract; claims 1-4; figures 1-4.	1-10
A	JP 2004-206232 A (NANA O CORP) 22 July 2004 See abstract; claim 1; figures 4-7.	1-10
A	US 2002-0134594 A1 (BRIAN TAYLOR et al.) 26 September 2002 See abstract; claims 1-3; figures 1,5.	1-10
A	KR 10-2001-0106031 A (LEE, TAEK HYOUNG et al.) 29 November 2001 See abstract; page 3, line 40-44; claim 1; figure 2.	1-10

 Further documents are listed in the continuation of Box C. See patent family annex.

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INTERNATIONAL SEARCH REPORT

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