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- (71) Applicant (for all designated States except US): **N-TRIG LTD.** [IL/IL]; 15 Atir Yeda Street, 2nd Floor, 44643 Kfar-Saba (IL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **STERN, Yuval** [IL/IL]; 51 Nahal Zavitan Street, 40300 Kfar-Yona (IL). **GELLER, Ilan** [IL/IL]; 13 HaTidhar Street, 42815 Pardesia (IL). **LESHEM, Yair** [IL/IL]; 12 Meir Ariel Street, 44648 Kfar-Saba (IL).
- (74) Agents: **G.E. EHRLICH (1995) LTD.** et al.; 11 Mena-chem Begin Road, 52681 Ramat Gan (IL).
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— of inventorship (Rule 4.17(iv))

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(54) Title: INTERACTING TIPS FOR A DIGITIZER STYLUS

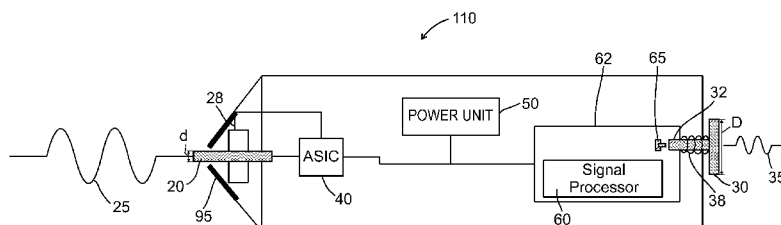


FIG. 1

(57) Abstract: A stylus for use with a digitizer sensor includes a housing confined by a first and second end, a primary tip positioned at the first end of the housing and associated with a first transmitting element, the first transmitting element having a first diameter, a secondary tip positioned at the second end of the housing and associated with a second transmitting element, the second transmitting element having a second diameter that is larger than the first diameter, a transmitting unit for transmitting a first signal with a first amplitude via the first transmitting element and for transmitting a second signal with a second amplitude via the second transmitting element, wherein the first amplitude is at least twice the second amplitude and a powering unit for powering transmission of the first and second signal.

INTERNATIONAL SEARCH REPORT

International application No
PCT/IL2012/050095

A. CLASSIFICATION OF SUBJECT MATTER
 INV. G06F3/044 G06F3/033
 ADD.
 According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
 Minimum documentation searched (classification system followed by classification symbols)
 G06F

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2007/146351 A1 (KATSURAHIRA YUJI [JP] ET AL) 28 June 2007 (2007-06-28) cited in the application	1,2, 7-20,24, 25,27-29
Y	abstract paragraphs [0189], [0195] - [0203], [0213] - [0225]; figure 21	21-23,30
X	US 7 292 229 B2 (MORAG MEIR [IL] ET AL) 6 November 2007 (2007-11-06) cited in the application	1-6, 10-20, 24,26-29
Y	column 17, line 59 - column 20, line 13	36-41
A	WO 2009/143046 A2 (HYPERCOM CORP [US]; HENRY CHRIS [AU]) 26 November 2009 (2009-11-26) the whole document	1-30
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Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p>
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Date of the actual completion of the international search 31 August 2012	Date of mailing of the international search report 07/09/2012
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Fournier, Nicolas
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International application No
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/040817 A1 (LEKUCH SCOTT [US] ET AL) 11 April 2002 (2002-04-11) the whole document -----	1-30
Y	US 2010/084203 A1 (PENG KE-REN [CN]) 8 April 2010 (2010-04-08) page 4, line 22 - page 5, line 9 -----	21-23,30
X	US 2010/006350 A1 (ELIAS JOHN G [US]) 14 January 2010 (2010-01-14) -----	31-35
Y	paragraphs [0038] - [0052], [0064] - [0070] -----	36-41
X	US 2009/262637 A1 (BADAYE MASSOUD [US] ET AL) 22 October 2009 (2009-10-22) paragraphs [0019] - [0024], [0029], [0034], [0035], [0051] -----	31,34,35

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/IL2012/050095

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2007146351	A1	28-06-2007	US 2007146351 A1 28-06-2007
			US 2010321288 A1 23-12-2010
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US 2010006350	A1	14-01-2010	NONE
US 2009262637	A1	22-10-2009	NONE

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-30

A stylus for use with a digitizer sensor comprising
(i.a) a housing with a first and second end, first tip positioned at the first end of the housing, a first transmitting element associated with the first tip and having a first diameter, a transmitting unit for transmitting a first signal of a first amplitude through the first transmitting element, and a powering unit for powering the transmission of the first signal
(i.b) a second tip positioned at the second end of the housing,
wherein either
(Alternative 1.1)
(ii) the stylus further comprises a second transmitting element associated with the second tip and having a second diameter larger than the first diameter, a transmitting unit for transmitting a second signal having a second amplitude that is half the first amplitude through the second transmitting element, and the powering unit powering also the transmission of the second signal
or
(Alternative 1.2)
(iii) wherein the second tip is a passive tip formed from conductive material and having a diameter of at least 3mm

2. claims: 31-41

either
(Alternative 2.1)
An interacting tip unit for providing input to a digitizer sensor
(iii) comprising an interacting tip formed of conductive material having a diameter of at least 3mm
(iv) the interacting tip unit adapted for retrofitting on one end of a stylus associated with the digitizer sensor
or
(Alternative 2.2)
A stylus for use with a digitizer sensor comprising
(i.a) a housing with a first and second end, first tip positioned at the first end of the housing, a first transmitting element associated with the first tip and having a first diameter, a transmitting unit for transmitting a first signal of a first amplitude through the first transmitting element, and a powering unit for powering the transmission of the first signal
(i.b) a second tip positioned at the second end of the housing,
(v) the second tip being one of a plurality of second tips, each operable to be attached to the stylus, and each operable to provide input to the digitizer sensor.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

3. claims: 42, 43

A stylus for use with a digitizer sensor comprising:
(i.a) a housing with a first and second end, a first tip positioned at the first end of the housing, a first transmitting element associated with the first tip and having a first diameter, a transmitting unit for transmitting a first signal of a first amplitude through the first transmitting element, and a powering unit for powering the transmission of the first signal,
(vi) first and second conductive areas surrounding the first tip, both electrically isolated from the transmitting element and from each other, and circuitry for transmitting a signal via the first transmitting element, the circuitry being also connected to the first conductive area and the circuitry comprising a switch so as to be selectively connectable to the second conductive area

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL2012/050095

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

1-41
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.