UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
61/778,888	03/13/2013		125	2104-052-C7-USP		

CONFIRMATION NO. 5007

UPDATED FILING RECEIPT

OC000000061571124

32964
DEKEL PATENT LTD., DAVID KLEIN
BEIT HAROF'IM
18 MENUHA VENAHALA STREET, ROOM 27
REHOVOT, 76209
ISRAEL

Date Mailed: 05/29/2013

Receipt is acknowledged of this provisional patent application. It will not be examined for patentability and will become abandoned not later than twelve months after its filing date. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Benjamin Firooz Ghassabian, Jerusalem, ISRAEL;

Applicant(s)

Benjamin Firooz Ghassabian, Jerusalem, ISRAEL;

Power of Attorney:
David Klein--41118

If Required, Foreign Filing License Granted: 04/01/2013

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 61/778,888**

Projected Publication Date: None, application is not eligible for pre-grant publication

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

DATA ENTRY SYSTEMS

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international

application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national

security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Applicant	:	Benjamin Firooz Ghassabian
Appl. No.	:	61/778888
Filed	:	13 March 2013
Title	:	IMPROVED DATA ENTRY SYSTEMS
Group Art Unit:		
Examiner	:	
Docket No.	:	2104-052-C7-USP
Confirmation No.:		5007

Honorable Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Re: Notice to File Missing Parts

Sir:

The notice mailed April 5, 2013, states that the following drawings are missing:

- Figure(s) **441A, B, 442A, 443A, B,C, 444, 445, 446, 446A** described in the specification.

Please note that these figures have been incorporated by reference to previously filed provisional applications as stated at the beginning of the disclosure, so no figures are missing and there is no error.

Respectfully submitted,

DEKEL PATENT LTD.

BY /David Klein/

David Klein, Patent Agent
Reg. No. 41,118
Tel +972-8-949-5334
Fax +972-8-949-5323
E-mail: dekelltd@netvision.net.il

Electronic Acknowledgement Receipt	
EFS ID:	15861366
Application Number:	61778888
International Application Number:	
Confirmation Number:	5007
Title of Invention:	DATA ENTRY SYSTEMS
First Named Inventor/Applicant Name:	Benjamin Firooz Ghassabian
Customer Number:	32964
Filer:	David L. Klein
Filer Authorized By:	
Attorney Docket Number:	2104-052-C7-USP
Receipt Date:	24-MAY-2013
Filing Date:	13-MAR-2013
Time Stamp:	05:05:53
Application Type:	Provisional

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	2104-052-C7_letter_to_USPTO.pdf	20317 f65f3d2cc832ec092cd2ca9d477db6c60a2a1f96	no	1

Warnings:

Information:

Total Files Size (in bytes):	20317

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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61/778,888	03/13/2013		125	2104-052-C7-USP		

CONFIRMATION NO. 5007

FILING RECEIPT

OC000000060179928

32964
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18 MENUHA VENAHALA STREET, ROOM 27
REHOVOT, 76209
ISRAEL

Date Mailed: 04/05/2013

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Power of Attorney:
David Klein--41118

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Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

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DATA ENTRY SYSTEMS

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SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

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United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
61/778,888	03/13/2013	Benjamin Firooz Ghassabian	2104-052-C7-USP

CONFIRMATION NO. 5007

FORMALITIES LETTER

OC000000060179929

32964
DEKEL PATENT LTD., DAVID KLEIN
BEIT HAROF'IM
18 MENUHA VENAHALA STREET, ROOM 27
REHOVOT, 76209
ISRAEL

Date Mailed: 04/05/2013

NOTICE OF OMITTED ITEM(S) IN A PROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(c)

A filing date has been accorded to the above-identified provisional application papers; however, the following item(s) appear to have been omitted from the application:

- Figure(s) **441A, B, 442A, 443A, B,C, 444, 445, 446, 446A** described in the specification.

Should applicant contend that the above-noted omitted item(s) was in fact deposited in the U.S. Patent and Trademark Office (USPTO) with the provisional application papers, a copy of this Notice and a petition (and $400.00 petition fee *(37 CFR 1.17(f))*, which will be refunded if it is determined that the item was in fact received by the USPTO), with evidence of such deposit must be filed within **TWO MONTHS** of the date of this Notice. Petitions should be mailed to: Mail Stop Petitions, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.

The failure to file a petition (and petition fee) within **TWO MONTHS** of the date of this Notice *(37 CFR 1.181(f))* will be treated as a constructive acceptance by the applicant of the provisional application as deposited in the USPTO. **THIS TWO MONTH PERIOD IS NOT EXTENDABLE UNDER 37 CFR 1.136(a) OR (b)** . In the absence of a timely petition in reply to this Notice, the application will maintain a filing date as of the date of deposit of the application papers in the USPTO, and original application papers (*i.e.*, the original disclosure of the invention) will include only those application papers present in the USPTO on the date of deposit.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at http://www.uspto.gov/ebc.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

/rerry/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Doc Code: **TR.PROV**
Document Description: Provisional Cover Sheet (SB16)

PTO/SB/16 (04-07)
Approved for use through 06/30/2010 OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

Provisional Application for Patent Cover Sheet

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c)

Inventor(s)

Inventor 1 — Remove

Given Name	Middle Name	Family Name	City	State	Country ¡
Benjamin	Firooz	Ghassabian	Jerusalem		IL

All Inventors Must Be Listed – Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. — Add

Title of Invention	IMPROVED DATA ENTRY SYSTEMS
Attorney Docket Number (if applicable)	2104-052-C7-USP

Correspondence Address

Direct all correspondence to (select one):

◉ The address corresponding to Customer Number	○ Firm or Individual Name
Customer Number	32964

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

◉ No.

○ Yes, the name of the U.S. Government agency and the Government contract number are:

PTO/SB/16 (04-07)
Approved for use through 06/30/2010 OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

Entity Status

Applicant claims small entity status under 37 CFR 1.27

- (●) Yes, applicant qualifies for small entity status under 37 CFR 1.27
- ( ) No

Warning

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

Signature

Please see 37 CFR 1.4(d) for the form of the signature.

Signature	/David Klein/			Date (YYYY-MM-DD)	2013-03-13
First Name	David	Last Name	Klein	Registration Number (If appropriate)	41118

This collection of information is required by 37 CFR 1.51. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **This form can only be used when in conjunction with EFS-Web. If this form is mailed to the USPTO, it may cause delays in handling the provisional application.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or paten. Accordingly, pursuant to the requirements of the Act, please be advised that : (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to an other federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal	
Application Number:	
Filing Date:	
Title of Invention:	IMPROVED DATA ENTRY SYSTEMS
First Named Inventor/Applicant Name:	Benjamin Firooz Ghassabian
Filer:	David L. Klein
Attorney Docket Number:	2104-052-C7-USP
Filed as Small Entity	

Provisional Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Provisional Application Filing Fee	2005	1	125	125
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**125**

Electronic Acknowledgement Receipt	
EFS ID:	15202871
Application Number:	61778888
International Application Number:	
Confirmation Number:	5007
Title of Invention:	IMPROVED DATA ENTRY SYSTEMS
First Named Inventor/Applicant Name:	Benjamin Firooz Ghassabian
Customer Number:	32964
Filer:	David L. Klein
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Attorney Docket Number:	2104-052-C7-USP
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1	Specification	2104-052-c7-desc-clean.pdf	214115 219449fca8d4e63168f0d978bfd705b87484ca94	no	31
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2	Drawings-only black and white line drawings	2104-052-c7-figs448A-449B.pdf	58577 e0ef243161564de761f5ad6e9d748ec59b2e8191	no	1
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Date: 13/**March/2013**

US Provisional Patent Application

Our ref: 052-c7
Title: **IMPROVED DATA ENTRY SYSTEMS**
Inventor: **BENJAMIN FIROOZ GHASSABIAN**

This application is part of the previous US Provisional Patent Applications:
The present application claims priority from US patent applications:

- application number 61599000 filed on February-15th, 2012
- application number 61601143 filed on February-21st, 2012;
- application number 61603390 filed on February-26th, 2012;
- application number 61608181 filed on March-8th, 2012;
- application number 61612509 filed on March-19th, 2012;
- application number 61613580 filed on March-21th, 2012;
- application number 61617224 filed on March-29th, 2012;
- application number 61620525 filed on April-5th, 2012 ;
- application number 61637384 filed on April-24th, 2012;
- application number 61641378 filed on May 2nd, 2012;
- application number 61647611 filed on May 16th, 2012;
- application number 61649322 filed on May 20th, 2012;
- application number 61651089 filed on May 24th, 2012;
- application number 61652950 filed on May 30th, 2012;
- application number 61656091 filed on June 06th, 2012;
- application number 61659536 filed on June 14th, 2012;
- application number 61660755 filed on June 17th, 2012;
- application number 61661390 filed on June 19th, 2012;
- application number 61663582 filed on June 24th, 2012;
- application number 61669152 filed on July 09th, 2012;
- application number 61671741 filed on July 15th, 2012;
- application number 61674358 filed on July 22th, 2012;
- application number 61679858 filed on August 06th, 2012;
- application number 61683219 filed on August 15th, 2012;
- application number 61697414 filed on September 6th, 2012;
- application number 61699408 filed on September 11th, 2012;
- application number 61704682 filed on September 24th, 2012;
- application number 61705164 filed on September 25th, 2012;
- application number 61711798 filed on October 10th, 2012;
- application number 61714842 filed on October 17th, 2012;
- application number 61718297 filed on October 25th, 2012;
- application number 61723860 filed on November 08th, 2012;

- application number 61730130 filed on November 27th, 2012 ;
- application number 61730584 filed on November 28th, 2012;
- application number 61737951 filed on December 17th, 2012;
- application number 61746581 filed on December 28th, 2012;
- application number 61749338 filed on January 06th, 2013;
- application number 61754707 filed on January 21th, 2013;
- application number 61760770 filed on February 5th, 2013;
- application number 61761321 filed on February 6th, 2013;
- application number 61764078 filed on February 13th, 2013;
- application number 61765751 filed on February 17th, 2013;
- application number 61766747 filed on February 19th, 2013;
- application number 61769285 filed on February 26th, 2013;
- application number 61772066 filed on March 4th, 2013;
- application number 61774605 filed on March 8th, 2013; and
- application number 61777102 filed on March 12th, 2013.

The drawings and text of the above applications are incorporated herein by reference. The titles used in this application and in the related applications may preferably not be considered as part of the descriptions.

Glide and hold for selecting a text written in said trajectory

According to one embodiment, a word or a chain of words may be selected by a predefined type of interaction such as a gliding action including a holding action (e.g. glide and hold, press and hold and glide) on said word (e.g. or chain of words) or preferably near said word (e.g. or chain of words) in the direction/trajectory that said word (e.g. or chain of words) has been entered. In this case, according to one method, a press and holding action on the screen/picture may correspond to another function such as dor example a horizontal trajectory for a text to be entered.

Using online graffiti

Sharing real time

Private fonts, Share fonts, share tools

The image editing application/functions described herein may permit providing/typing graffiti on a background image / textbox. As such according to one embodiment a social picture sharing application may be created so that user can, edit (e.g. write graffiti preferably simultaneously, an image in in a cloud server.

Reserved location on an image

According to one embodiment, the image editing system may be designed such that to not allow (e.g. editing) access in a predefined location on an image, preferably unless a user has an authorization (e.g. through a password). For example, access to the bottom right of an image may be reserved to an editor's signature or an advertisement, etc.

According to one embodiment, mouse function of the system may be used to edit an image. As an example, if the user provides a press-and-holding action (e.g. anywhere or between the keys) on an image/screen, the system may show several mouse functions such as select, select all, copy, cut, past, preferably around his/her finger. The user them may slide the finger towards one of the functions to activate it. As an example:

Select: a portion of an image may be selected by many means. As an example, the menu of the system may have several selection pattern (e.g. square, round, free pattern, etc.) buttons, wherein after interaction with such a button, the use may provide a gliding action on a desired location on the picture, and the system may select a portion of the picture according to the shape of the selected pattern and preferably the length of the gliding action. Optionally, a press-and-holding-and-gliding action at any moment on the screen/image may result in selecting a portion of the image based on a predefined or the last selected pattern.

According to one embodiment, the selected portion may be resized by for example touching a predefined point of it and dragging said point. According to one method, providing a long pressing action combined with gliding action in s predefined direction may resize the selected portion accordingly. According to one method a such gliding action in the middle of the selected portion drags the portion in the corresponding direction on the screen.

Copy: after selecting a portion of picture, a press and holding action combined with a gliding action in the direction of the Copy function/icon may preferably copy the selected portion of the image.

Cut: after selecting or copying a portion of picture, a press and holding action combined with a gliding action in the direction of the Cut function/icon may preferably cut the selected portion from the image.

Paste: after selecting or copying a portion of picture, a press and holding action in a desired location on the screen/picture combined with a gliding action in the direction of the Paste function/icon may preferably paste the copied portion, preferably on in the pressed position, on the image/screen.

Select-All: a press-and-holding-and-gliding action at any moment on the screen/image in the direction of Select-All function may select the whole image.

It must be noted the features and methods of editing an image/picture as described herein are created to permit a simple and quick picture taking/picking, editing, and sharing procedure(s).

Preferably during the modifications/editing (e.g. of the/a word/text) described above, the image/picture on which the editing procedures are being applied is shown to the user so that he can rectify apply and/or rectify his/her modifications accordingly (e.g. according to the image or a portion of the image characteristics).

According to one embodiment of the invention, preferably, an interaction, such as press-and-holding action or a gliding action, corresponding to mouse functions is not provided on a text

or on a selected portion of an image (e.g. herein may be referred to as the selected content) to not interfere with other functions such as dragging a selected content . As such according to one example, after selecting a content such as an image or a text (e.g. one or more words. Note that a grabbed word or a word being entered is also considered as a selected text) if a user provides a gliding action including a press and holding action (e.g. at the beginning of the gliding action) at a position/location on the screen wherein said gliding action corresponds to a pasting action, the selected content may be pasted at that position/location. Fig. 438A shows as an example, a picture 438010 being displayed on the screen of an electronic device such as a smartphone or tablet, and wherein a menu 438011 relating to selecting patterns is also shown/poped up. After the user selects one of the patterns 438012, he may provide a gliding action 438013 on a desired location on the screen to select the portion of the image 438014 at that location corresponding to the shape of the pattern and the length of the gliding action. Then, as shown in fig. 438B, by providing a press and holding action (e.g. or a press and holding action combined with a gliding action in a predefined direction) on a desired position on the screen/image and the system may paste the selected portion at that location. Preferably (not shown), after selecting a selecting pattern, the menu is removed from the screen so that to permit the access to the whole image/screen for the pasting action.
Note that, (e.g. after providing a press-and-holding action) the different directions of the gliding actions corresponding to different mouse function may be those described before in related/previous patent applications filed by this inventor (e.g. gliding towerds lower-right direction may correspond to selects all/select the whole picture, towards lower-left may correspond to paste function. Gliding towards upper-left direction may correspond to cut function. Gliding upper-right direction may correspond to copy function, etc.

It must be noted that the functions, interactions, procedures, methods. etc., relating to editing a picture as described throughout this and the related patent applications filed by this inventor may not be restricted to editing a picture. The may be used to provide functions in any other application.

The keyboard used with the picture editing applications/concepts/functions/etc., as described in this and the related patent applications filed by this inventor may be of any type. As an example, said keyboard may be a keypad of the invention having any number of (e.g. letter) keys (e.g. two to eight) wherein at least some (e.g. one) of the keys corresponds to several characters/letters, and use a word prediction software to predict words from a corresponding database. According to one method, the letter keys of such keyboard may be related to all of the letters of a language excluding a/the predefined zone corresponding to non-preferred characters. According to another method, such keyboard may include one or more predefined zones corresponding to non-preferred character. Preferably, the letter keys may be split into two or more groups wherein each group is located on a different side/edge of the (e.g. screen of) the corresponding device, and wherein such a/the zone

may be located between said split groups. According to another example such keyboard may be a QWERTY keyboard. According to another example, such keyboard may be a keyboard wherein each of its letter keys corresponds to a precise letter/character/symbol and wherein its keys may be (preferably) arranged on the sides of the screen of the corresponding device.

When a (e.g. an edited) picture is shared with another party, preferably at the similar time the receiving party may receive a means such as for example a link/button preferably next/on the picture such that interacting with said means may permit the user to type on the edited picture preferably instantly and may share it (e.g. back) with the sender and/or others. If the corresponding data entry / input system is not installed in the receiving party device, said system may automatically downloaded (e.g. and installed) into the receiving party's device.

A spelling help feature/method used by the system has been described before in detail. According to one embodiment of the invention, the system may be designed such that a user may enable/disable (e.g. switch on/off) said spelling help feature/method. According to one method, said method/features may be enabled or disabled from a settings menu corresponding to the system. According to one method, when activated, said spelling help method, may be applied from the first character of a word being entered. According to one embodiment of the invention (e.g. when the spelling help is enabled), (e.g. during the entry of a text) preferably, said spelling help may be applied to a word being entered only if the user provides at least a predefined number of (e.g. at least two) key presses (e.g. herein said predefined number may be referred to as "required minimum key presses") from the (e.g. four) letter keys (e.g. from the narrowly ambiguous keys, and/or from the precise letter mode keypad). As an example, by considering the keypad of fig. 436B, if said required key presses number is two and the user provides four consecutive tapping actions on the zone 436107 between the keys (e.g. broadly ambiguous zone), the system does not use the spelling help mode even if it is activated (e.g. from the settings), to for example provide the word "much". In this example, the system relates said tapping actions to the non-preferred characters assigned to said zone and does not relate any of said tapping actions provided on the said zone to any of the preferred characters (e.g. which are assigned to the (e.g. four) ambiguous letter keys). Accordingly, according to one example, if the user taps on the key 436101, taps two times on the zone 436107, and taps on the keys 436101, the system may ambiguously relate each of the two tapping actions on the zone 436107 to any of all of the characters assigned to said zone (e.g. non-preferred characters) and to the characters assigned to the four letter keys (e.g. preferred characters) (This matter has been described before in detail) and proposes some words including the word that has the highest priority among the corresponding words. It must be noted that the system may also include a word completion means/software such that to, accordingly, propose completed words based on receiving partial input information corresponding to a (e.g. beginning) portion of a word being entered.

According to one embodiment of the invention, if the device/screen is in portrait mode, the word list may preferably be shown vertically and if the device/screen is in landscape mode, the word list may preferably be shown horizontally (e.g. as shown before).

According to one embodiment of the invention, if a word being entered is entered through interacting with the keypad of the system in precise mode, then preferably said word may simultaneously be entered in the text and in the word list (e.g. as the current predicted word). If a word being entered is entered through interacting with the keypad of the system in predictive mode, then preferably said word may be entered in the word list alone (e.g. as the current predicted word).

Methods of swapping words (e.g. in a word list) have been described before. According to one embodiment, if in the word list, in addition to the current predicted word, one or more candidates are also proposed, then a predefined swapping action for example by means of a gliding action simulating another gliding action provided from the current predicted word towards a candidate (e.g. or vice versa), wherein said gliding action is provided on the word list or in the zone between the keys, may replace the current predicted word by the first candidate word next to the current predicted word. Accordingly, an additional such gliding action may replace the current predicted word by another candidate preferably the second word next to the current predicted word, and so on. Note that, one or more such candidates may be shown on each side of the current predicted word. As such one or more gliding actions provided in a similar direction corresponding to each of the sides of the current predicted word may preferably correspond to the first, second, or other corresponding candidates on a corresponding side of the current predicted word.

With continuous description of the current embodiment, after providing a swapping action, preferably when the user appends a letter/character to or deletes a letter/character from the swapped word, the system may preferably consider the characters of the swapped portion as being precise characters (e.g. herein may be referred to as fixing a word/stem). According to one method, if the user desires to fix the current predicted word, he/she may provide a back and forth gliding action in a predefined direction such as upwards or downwards in preferably the/a predefined zone and/or on the wordlist. Now, a swapping action was applied on the current predicted word, when appending characters to said word or deleting characters from said word, the swapped portion of the new word may be considered as fixed (e.g. precise)

According to one embodiment of the invention, the system may use one or more database of words including 1 to N (e.g. 5) gram entries. When the user enters the input information corresponding to a current predicted word, the system may preferably consider N-1 words prior to the word being entered (e.g. prior to the cursor) in the text (e.g. herein may be referred to "prefixed portion") and combine it with the input information corresponding to the current word being entered (e.g. herein may be referred to combined word information" to predict one or more words from the

N gram database. Subsequently, then the system may consider N-2 words prior to the word being entered (prior to the cursor) combined said input information being entered to predict one or more words from N-1 gram database. And so on until (including) N=0 (e.g. until proposing 1-gram words). If the words preceding the current predicted word being entered are n number of words wherein n<N-1, then the system considers said n words combined with the input information corresponding to the current predicted word and begins to search in the entries of n+1 gram database then, then n, then n-1 until the 1 gram database. It must be noted, that after searching for the corresponding words, the corresponding words may be presented to the user (e.g. according to their priorities) until the user selects one of them. Note that in the search procedure as described, if a combined word information matches an entry in the database, then preferably, the system selects the last gram of said entry and proposes it to the user.

In most cases, a 2 gram word database may provide enough information to the word predictive system to accurately predict a word. But in some cases, in an N gram entry, the first beginning gram of the entry may not provide enough information to the system if it if constituted of one of a number of words such as "the", "a", "of", "to", etc. (e.g. herein may be referred to as non-informing words). In this case, an N gram database wherein N>1, may preferably mainly include entries that their first gram exclude a non-informing word. This may permit to have a reduced sized N-gram database (e.g. that also includes 1-gram entries) for an accurate prediction.

The arrangement of an N gram database to be used by a/the word prediction system for accurate and fast prediction have been described in detail in previous patent application filed by this inventor. They may preferably be included in/with this application by reference. As an example, the first gram of gram N gram entries (e.g. N=>0) may preferably include or be constituted of one or more special characters. In this case, for example, a dot character as the first gram of an N-gram entry (e.g. wherein N=2) may provide information to the system that the second word of the entry is a word that is generally entered at the beginning a sentence.

According to one method, different identified character/word (e.g. '~') or a predefined code may be assigned to different categories of entries in a database. For example, in an N-gram (e.g. 2-gram) database, a first type of character (e.g. "~") delimiting grams from each other, wherein the last gram letters are lowercased letters may be used. In a same database, a second type of character (e.g. "`") delimiting grams from each other, wherein the at least one of the last gram letters is an uppercased letter, may be used. According to another example, a third type of character (e.g. "|") delimiting grams from each other, wherein at least one of the characters of the last gram includes a character other than a letter, may be used. And so on. When the user enters a word having a characteristic such as those just described, the system may be designed such that the system

searches for the corresponding word/entries within the database having at least one of said characteristics. This method permits a quicker search in the database.

According to a first method of search, when the system is looking for a word based on the input information provided by the user, the system first look in the corresponding N-gram (e.g. 2-gram) entries of the database wherein the input information provided by the user corresponds to all of the characters of the corresponding (e.g. last) gram. If there is no corresponding word found, the system may then proceed to the 1-gram entries wherein the input information provided by the user corresponds to all of the characters of the corresponding gram.

If there is no corresponding word found, the system then looks in the corresponding N-gram (e.g. 2-gram) entries of the database wherein the input information provided by the user corresponds to the beginning characters of the corresponding (e.g. last) gram. If there is no corresponding word found, the system may then proceed to the 1-gram entries wherein the input information provided by the user corresponds to the beginning characters of the corresponding gram.

According to a second method of search, when the system is looking for a word based on the input information provided by the user, the system first look in the corresponding N-gram (e.g. 2-gram) entries of the database wherein the input information provided by the user corresponds to all of the characters of the corresponding (e.g. last) gram. If there is no corresponding word found, the system then looks in the corresponding N-gram (e.g. 2-gram) entries of the database wherein the input information provided by the user corresponds to the beginning characters of the corresponding (e.g. last) gram.

If there is no corresponding word found, the system may then proceed to the 1-gram entries wherein the input information provided by the user corresponds to all of the characters of the corresponding gram. If there is no corresponding word found, the system may then proceed to the 1-gram entries wherein the input information provided by the user corresponds to the beginning characters of the corresponding gram.

According to one embodiment of the invention, the user may type a word or grab/select a word within a text and then he/she may be enabled to delete said word from the dictionary / word-database used by the system. According to one method, the user may long-press on said word (e.g. which is preferably in a word list) to delete it. After providing the long pressing action on the word, the user may be informed of the deletion of said word by, for example, changing the color of the word or the words background to, for example, red. Note that, before deleting a word, the system may ask the user to confirm the deletion action. A words/entry deleted from the/a database may be saved along with its frequency of use such that if the user decides to re-insert it in the database, the system may insert its corresponding frequency. According to one method, delting a word from the

dictionary may cause deleting it from all of the entries of an N-gram database. According to another method, said word may be deleted from the 1-gram database only.

As mentioned before, the keyboard used with the picture editing software/feature may be of any type such as for example a QWERTY keyboard. According to one embodiment of the invention, a gliding action or a long-pressing action provided from/on said keyboard may be related by the system to the trajectory of the text being entered over a/the image which preferably is printed on the screen wherein preferably a portion of it is located under said keyboard.

According to one embodiment of the invention, the keys of the keypad/keyboard (e.g. preferably in the ambiguous mode) of the invention used with a/the picture editing software/feature may be transparent/invisible so that to permit to see the content (e.g. a portion of a/the image) under said keypad/keyboard. As such, according to one embodiment, only a/the frame of a key may be shown on the screen. In the visible mode, in addition to the frame, the characters/letters assigned to a key may be printed within said frame but preferably, the rest of the key may be transparent/invisible. According to one aspect, the letters on such a key may be printed in two contrasted colors (e.g. white and black) such that regardless of the color of the content under a/the key, at any moment said characters/letters may be visible to the user. An example of a key of such keyboard/keypad is shown on different background colors (e.g. white, black, and red) in Figs. 437A to 437C.

Swapping procedure (e.g. by tapping on a word)

Methods of replacing the current predicted word/stem being entered by another candidate (e.g. another word) relating to the input information provided by the user has been described in detail before. According to one method of the invention, a predefined interaction, such as a tapping action, on any of the words of a list (including the current predicted word) of predicted words (e.g. herein may be referred to as a word list) may preferably set said word as the current predicted word. Preferably, the system also fixes the characters of the selected word (e.g. the system considers all of the characters of said selected word as precisely entered characters). According to one method, in addition to the word list, the system may preferably show the selected word also in the corresponding text field. Additionally, the system may propose/predict one/more longer-word(s) beginning with the characters of the selected word as a new world list. According to one aspect, at this point in time, on one hand, if the user provides and end-of-word signal such a pressing the Space key, the selected word may preferably be entered into the text and the word list may disappear. On the other hand if the selected word/stem is the beginning of a desired longer-word, at least two scenarios may be considered:

1. The desired word of the user is among the words of the new word list. In this case, the user selects that word (and enters a Space character); and
2. the desired word is not a word of the words in the new word list. In this case the user proceeds to enter/append additional characters at the end of the selected word. By considering the fixed selected portion and the input information corresponding to the additional characters, the system predicts corresponding longer-words (e.g. beginning with the fixed selected portion).

According to one method, after a word is selected, if the user deletes one or more of the selected word, the remaining characters still remain fixed and corresponding longer words may preferably be proposed/predicted (e.g. in a word list of one or more words).

As an example, in order to enter the word "actionable" the user may first tap the keys corresponding to the word/stem "act". The system may propose the word "why" as the current predicted word and several more words which includes the word "act". The user may tap on the word "act" (e.g. in the wordlist) to select it. Preferably, at this time, the word "act" becomes the current (e.g. predicted) word. Now the system may propose longer words that begin with the word/stem "act" including the words "actually", "activity", and "action". At this time the user may select the word "action" by tapping on it. Now the word "action" becomes the current (e.g. predicted) word. At this time the system proposes several longer words beginning with the word/stem "action", including words "actionable", "actions", "action's". The user taps on the word "actionable" to select it. At this time the word "actionable" becomes the current predicted word and the user may press the Space key to enter said word.

Note that after selecting each of said word/stems, in addition or in replacement of within the word list, the system may also show any of the selected word/stems in the text itself.

In the current embodiment, if a provides a predefined interaction, such a tapping action, on the current predicted word (e.g. in the word list) this may result in fixing the current predicted word. As a result, if the user continues to append additional characters to the fixed current predicted word, the fixed portion may remain unchanged and based on the input information, including said fixed portion and additional characters, the system may propose one or more words.

For ease of explanation, predefined interactions such as tapping or sliding actions have been used to describe the principles of the data entry system. Note that this was only used for demonstration

purposes and said predefined interactions can be used for the same purpose and can be replaced by any kind of interaction, such as speech commands, interacting with a button, or gestures in the air, etc.

Organizing a database of words

Based on the principles just described above, according to one embodiment, a database of words may be organized/created such as to include at least the most commonly used stems (e.g. "pre", "con", "com", "dia", "multi", "multi-"). According to one concept, preferably, the length of said at least most commonly used stems may be limited to a predefined number of characters (e.g. up to 3). According to one method, the user may provide the input information corresponding to a desired stem.

- If the desired stem (e.g. a stem of a long word may, by itself, be a complete word) is in the word list proposed by the system, the user may select that stem and thereafter the system may propose another word list having longer words (e.g. in some cases said a longer word may be the beginning stem of a still longer word) that may include the user's desired word/stem, as described above. And so on. Note that, as describer earlier, at any moment the user may proceed to appended additional characters to the selected stem/word or to delete characters from selected stem/word.

Note that after providing said input information corresponding to the desired stem, if said stem is not in the word list as proposed by the system, the user may provide a predefined interaction so that the system may propose an additional word list corresponding to said input information, and so on.

Note that the N-Gram database including said at least most commonly used stems may be an N-gram database (e.g. N>0) wherein said stems created as such are preferably located/positioned as the last gram of the corresponding entries of the database.

Word list

- **Wordlist in order based on length**
    - **Blue on the top**

    The predicted/proposed words may be presented in a word list according to different methods. According to a preferred method, the current predicted word may be presented at a predefined location (e.g. on the top, bottom, left side, or right side) in a word list , and the other predicted/presented words may be presented based on their length next to (e.g. under, above, right side, or left side, respectively) the current predicted word. When a proposed word (e.g. among the list) is selected, said word may preferably replace the

current predicted word and additional words/candidates may be predected based on the selected word and be presented preferably next to the current predicted word (e.g. below the current predicted word). The order of presentation of said additional predicted word(s) may preferably be based on their length and preferably, based on the alphabetical order in a same length.

Double/more taps on a same word provides more choices

According to one aspect, repeating an interaction such as a tapping action on a same predicted/candidate provides additional candidates based on said word/stem.

- **Spelling help starts after selection**

  According to one aspect, after a word is selected, the automatic spelling help feature described before in detail, may preferably be activated.

- **3 chars stem list**
  - **On the left**
  - **Based on 300ms pause**
- **Next applies to both sides of to the side where the gesture is provided (e.g. gesture can be applied on the wordlist itself)**

According to one embodiment of the invention, a database of words used by the system, may include may include at least substantially significant number of stems wherein their length preferably is up to three characters.

According to one embodiment of the invention, in addition to or in replacement of some of the words of a list/number of words corresponding to the input information provided by the user during the entry of a desired word as described earlier, additionally, at least some corresponding stems, preferably the beginning stem of corresponding words, may be proposed preferably on a different location. For example, the word list described throughout this application may be presented on the right side of a screen and said additional stems may be proposed on the left side of a screen. According to one method, said additional stems may be printed on the screen if the user pauses for at least a predefined period of time during the entry of the input information (e.g. key interactions) corresponding to the desired word. According to one method, said stem(s) may be presented to the user, after the user provides the input information corresponding to (e.g. at least) a predefined number of characters (e.g. two) of the desired word preferably regardless of the/a (e.g. at least a) predefined length of a stem to be shown to the user. As a first example, after providing the input information corresponding to the first two characters of a word, in addition to longer words, the system may preferably show/present at least some (e.g. preferably, all) of the corresponding beginning stems (e.g. of words to be proposed corresponding to the input information) having two

characters. As a second example (e.g. a preferred method), after providing the input information corresponding to at least (e.g. preferably, the first) four or five characters of a word, (e.g. on or starting from that moment) in addition to the corresponding words, the system may preferably show at least some (e.g. preferably, all) of the corresponding beginning stems having two characters.

With continuous description of the current embodiment, if the user selects one of the proposed stems,the system may present/predict/propose the word(s) corresponding to the input information provided by the user wherein their first (e.g. two) characters begin with the selected stem.

According to another embodiment of the invention, when a user selects a proposed/predicted word (e.g. in the word list), the system may preferably consider a predefined number of its (e.g. beginning) characters and propose other words corresponding to the input information provided by the user and having (e.g. beginning with) said characters.

According to another method, during the entry (e.g. of the input information) of a word, the proposed stems may correspond to any predefined portion of a word being entered.

Stems

Proposing the beginning stems

Can have any length

- **System decides, based on the number of diferent stems**
- **From a predefined number**

Stems shown in a tree-based order

- **Tap several times on the stem**

- **Can include all of the stems such that to not require more key presses**

Different length in a same list

According to one embodiment of the invention, during the entry of a word the system may propose the stems corresponding to a portion of a word corresponding to the input information being entered. The length of said stems may be defined differently according to several aspects such as:

a) The (e.g. length of the) stems may be constituted as a predefined number of characters such as, for example, two characters (e.g. herein may be referred to as "fixed length stems"). They may be shown to the user at a predefined moment during the entry of the input information corresponding to the word being entered.

b) The length of the stems and/or the moment to be shown to the user may dynamically be defined by the system based on various parameters. As a first example, different stems

corresponding to the input information being provided by the user may be presented to the user when the number of (e.g. different) stems is less than a predefined number. According to one method, the length of the stems being proposed at any instance may be different from each other (e.g. hereafter may be referred to as "free length stems").

Preferably, each of the stems proposed to the user is a different beginning portion of the word(s) corresponding to the input information being entered.

According to one embodiment, the first time (e.g. fixed length) stems are presented to the user is when a user provides the input information corresponding to preferably a predefined number of characters. If the user selects one of said stems, then the system may propose also longer words including/beginning with said stem. Preferably, the system also proposes a number of new stems corresponding to a longer portion of the word(s) corresponding to the input information provided until then (e.g. the key interactions and the selected (e.g. fixed length) stem). The user may select one of the new stems and so on. Note that, preferably, the length of the new stems may vary based on the corresponding words preferably such that to reduce the number of key interactions required for entry of a desired word, preferably also considering that the number of presented stems are considered as not being significant (e.g. not more than seven so as to not occupy a large portion of the screen). According to another aspect, if the number of various stems is significant (e.g. more than a predefined number), the system may first show a/some of them. According to one aspect, the system may propose more stems after the user provides a predefined rejecting/next interaction.

The order of the stems shown/proposed (e.g. in a stem list) may be of any kind such as based on the frequency of use of the corresponding words, alphabetical order, etc.

It is understood that after a list of stems is shown to the user, the user has the option to select a stem or continue typing without selecting one.

Figure 439 shows a flow chart relating to a preferred method of for entering words while using/interacting with stems and/or complete words and/or the keyboard. In step 439001, the user enters the input information (e.g. appending characters by tapping on the keys of the keyboard) corresponding to a number of characters of a desired word. Said number of characters may be a predefined number of characters or the number may be defined dynamically by the system depending on the number of the corresponding various stems relating to the provided input information. In step 439001, the system shows/proposes the corresponding words corresponding to the provided input information. At step 439003 the system shows/displays, at preferably the same time as step 439002, a number of various stems corresponding to the beginning characters of the words of the database corresponding the provided input information. According to a preferred method, the length of said stems may a fixed and/or limited number of characters such as, preferably, two characters. Note that the number N, in step 439001, may vary depending on the

nature of the database. Preferably, the relationship between the said various stems and the input information may be such that the stems may be presented/proposed given that the number of such various stems complies with set criterion/criteria (e.g. predefined number or limit). At the condition 439011, if as show in step 439004, the user selects a proposed stem or a complete word, then as shown in step 439005, the system may propose new word(s), if at all any, wherein their beginning characters start with the selected stem or word of step 439004. Now, as shown in step 439006, the system may propose/show new stems (e.g. longer than the previous stems) preferably beginning with the selected word/stem and corresponding to the input information provided to the user until then. At this point, as shown in condition 439010, if the user provides an end of word (EOW) signal, such as tapping on the Space key, the system may enter the selected word. If not, the system goes to condition 439011.

With the continuous description of the current example, after exiting step 439003 or exiting condition 439010, if at the condition 439011, the user ignores the proposed/presented stems and/or completed words and proceeds to the step 439007 by continuing to input addition input information (e.g. appending characters), the system may show/propose new words and/or stems. Note that if the system enters step 439007 from a path including step 439003, then the length of the proposed stems may preferably be similar to those stems as described in step 439003. Alternatively, if the system enters step 439007 from a path including condition 439010, then the length of the proposed stems may preferably be similar to or longer than the stems proposed/shown in step 439006.

Note that it may happen that the length of the stem and the length of the selected word are equal.

A character in remaining portion which is rarely used with others

According to one embodiment of the invention, instead of or in addition to the stems, during the entry of a word the system may show/propose a specific character of a word corresponding to the input information provided by the user. Preferably, said character may be a character (e.g. z, x, b) that is rarely used in the corresponding words.

In the current embodiment of the invention, providing a predefined interaction corresponding to informing the system that the words in the word list at some location (e.g. on the right side) are rejected so as to cause the system to show more corresponding words, may also cause the system to show more stems at some location, preferably on the left side of a screen.

According to another embodiment of the invention, a first predefined interaction causing the system to show more stems, may be a different predefined interaction from said first predefined interaction such as, for example, sliding on a proposed list of stems.

- **Priority to inverse for stems/ show less priority first**

According to one method, the stems shown to the user corresponding to the input information provided by the user, may be presented according to some criterion/criteria, such as, for example, according to their stem frequency/priority such as, for example, from highest to lowest or, as another example, from lowest to highest.

According to a preferred embodiment, the order of stems being presented to the user based on the corresponding input information entered by the user, may preferably be based on the beginning stems of a word that requires many key presses before being predicted/proposed by the system.

Precise letters in predictive mode for stems

Showing precise and/or ambiguous words, simultaneously (e.g. on opposite sides of a screen), based on user interactions with the keys/zones of a keypad has been described in detail herein. According to one embodiment of the invention, in the word list corresponding to ambiguous key presses provided by the user one or more words corresponding to precise characters relating to said key interactions may be proposed to the user. As such, at any moment during the entry of a word, a user may enter a desired stem of a word and then interact (e.g. tap on) with that stem to select it and to later provide longer words, as described herein, where the beginning portion of the longer word corresponds to the selected stem. According to one embodiment, the keys used for such purpose are ambiguous keys of the invention displaying the preferred (e.g. and/or none-preferred characters).

Precise Characters/Stems

According to one method of the invention, a stem/portion, preferably the beginning stem/portion of a word, may be entered precisely, letter by letter. The method of entring precise characters using/through ambiguous keys has been described in detail before. As an example, according to one method, when the system is in ambiguous mode, interacting with a key (e.g. such as a tapping action on a key) may simultaneously be interpreted by the system as ambiguous interactions and precise interactions. As mentioned before, when a user taps on a key, the system may consider the tap as being ambiguously related to any character on said key. Simultaneously, the system may also relate said tapping action on the key to an identified character on which, or on a zone to which, said said character is assigned and wherein said tapping was provided. Other characters on said key may be entered precisely by providing corresponding gliding actions on/from said key. According to one method, preferred characters may also be entered precisely by providing corresponding (e.g. short) gliding actions as described before (e.g. upward, downward, leftward/rightward). As an example, if the user desires to enter the word "organization" the user may first tap precisely on the letters 'o'

and 'r' on the corresponding keys, then provide a gliding actions corresponding to the letter 'g'' to enter it precisely. By considering said tapping and gliding actions (e.g. input information), the system may propose two kinds of words. A first type of word is provide/presented as if all the characters relating to the word are considered by the system as being entered precisely. In this case, the word/stem "org" is proposed. Simultaneously, one or more second type of word(s) may be proposed based on ambiguous key interactions (e.g. except the character 'g' that was entered precisely). In this example, the system may propose 'dog', 'dogs', 'organic' and 'roger'. At this time the user may tap on the precise chain of characters to select it, and the system may propose a number of longer words beginning with said precise chain of characters/stem "org" (e.g. the words: 'organic', 'organized', 'organizes', 'organization'). Selecting a stem to provide longer words/stems and methods of entering any of them have been described in detail before.
Note that, after the user provides such key interactions/input information, according to various methods, the system may provide one or more longer words based on or considering said chain of characters as being precisely entered and one or more words (e.g. same sized words or longer words) by (e.g. simultaneously) considering said input information as being ambiguously entered.

- 1 precise word, others ambiguous
    - **Show the after that precise**
    - **Show the list**

After entering such input information and selecting one of the proposed words if the user provides additional input information (e.g. key interactions), according to one method the system may consider said additional input information as being ambiguously entered and/or precisely entered and may provide words correspondingly.

Note that, ambiguous input information preferably refers to input information wherein said information refers to at least one or more ambiguous characters even if said input information also refers to one or more precise characters. Preferably, the word list corresponding to proposed words/stems may include both stem(s)/word(s) that include the characters precisely entered and/or one or more words ambiguously corresponding to the provided input information. As an example, when the user taps on a key, the system may refer said tapping action to two scenarios.

A) According to a first scenario, the system refers said tapping action to an identified character on the key on which the tapping action was provided.
B) According to a second scenario, the system ambiguously refers said tapping action to any of the characters on said key. These matters have already been described before in detail.

- **Include special chars**

Providing short and/or long gliding actions in a predefined direction on/from a key/zone for entering two different characters (e.g. a letter and/or a special character, respectively, or vice versa) has been described before in previous patent applications filed by this inventor. According to a preferred embodiment of the invention, in addition to tapping precisely on the preferred letters on the keys, when the system is in the ambiguous mode, short gliding actions provided on an ambiguous key may correspond to entering precise characters/letters assigned to said key and longer gliding actions on/from said key may preferably correspond to entering special characters assigned to said key. Accordingly, a long pressing action on an ambiguous key may correspond to entering a special character, too. Preferably, after beginning a gliding action and/or providing a long pressing action on/from a key, the system may show the letters and special characters assigned to said key (e.g. including or excluding preferred characters as shown in Figure 440B) so that the user can see them while providing said gliding and/or long pressing actions. Figure 440A shows, as an example, the keypad of the invention in ambiguous mode before providing a gliding and/or long pressing action on/from any of the keys of the keypad. Figure 440B shows the keys of said keypad during providing a gliding action (e.g. short/long) and/or long pressing action, provided on any one of the keys of the keypad. A key of this keypad, in such a case, herein may be referred to as 'expanded key.' According to one method, only the key on which said gliding and/or gliding action is provided is expanded. According to another method, all of the keys may be expanded during providing of a gliding action and/or long pressing action on any key. In the example of the keypad of Figure 440B, the preferred character 'w' can, preferably, be entered by providing a tapping action on it or on a zone assigned to it. On the other hand, as shown in Figure 440B, said preferred character may also be entered precisely by providing a short gliding action 440212 in its direction (e.g. upward for 'w', downward for 'n', leftward/rightward for 'a'), this matter has already been described in detail before. On the other hand, providing a longer gliding action 440211 may preferably correspond to entering the special '2'. In this example, a long-pressing action on the key 440202, without providing a gliding action, may correspond to entering a center character (e.g. the special character '5' in this example). Alternatively, a back and forth gliding action may correspond to entering a center character.

In such case, according to one method, the expanded keys of the keypad may not be shown to the user, while such interactions are provided. This may permit, may permit the user to type on invisible keys. Preferably the invisible keys, in ambiguous mode, may be presented/displayed only by a frame as described before.

- **Short and long press**

- **Center char long press**
- **Show the keys**
  - **Can include precise preferred letters**

- **additional key presses based on ambiguous or precise**
- **Grabbing a word**

According to one embodiment of the invention, the word already entered may be grabbed (for example, for editing) by providing a double tapping action on said word.
According to one embodiment of the invention, providing a (e.g. short) gliding action, corresponding to a letter, including a holding action may change the case of the letter (e.g. from lower case to upper case, or vice versa).
Preferably, when a user provides a long pressing action or short gliding action, the center of the corresponding expanded key may be located under the touching point under the user's finger.

- **Applies to any kb**
  - **QWERTY**
  - **User can type approximately**

As mentioned before, any of the principles, features, concept, aspects, etc., may be applied to /used with any type keyboard for example a QWERTY keyboard. For example, in the embodiments above, after typing a the beginning of a word, the system may propose some candidate beginning with the beginning portion, and the user may interact with a proposed word so that the system propose additional words beginning with/based on the interacted word. According to one embodiment, after providing a beginning portion of a word, when the user interacts with a key of such keyboard, the system may also ambiguously correspond said interaction with the neighboring keys of the interacted key, and by considering said beginning portion and one or more such key interactions the system predicts corresponding one or more words. In this embodiment, because the beginning portion is entered precisely, an approximate interaction with the keys corresponding to one or more remaining characters of a corresponding desired word may be enough for predicting said word.

The principles, herein described, of swapping/replacing words/stems being selected and used as a fixed portion (e.g. preferably the beginning portion) of another word/stem (e.g. and if desired/needed) appending or deleting characters from the selected word establishes a new way of inputting (e.g. typing) by mixing interactions of keys/zones of a keyboard (e.g. having ambiguous and/or precise keys) and the presented/predicted/proposed words/stems to predict a (e.g. desired) word.

- **Korean**

The principles of using stems/words mixed with keyboard interactions and word/stem interactions described herein may be applied to any type of (e.g. alphabetic) language such as Roman based languages (e.g. English, Italian), Korean, Hindi, Arabic, Hebrew, etc.

Chinese/Japanese

The principles of swapping and/or selecting word(s)/stem(s) and preferably proposing/predicting longer word(s)/stem(s) including (e.g. beginning with) a selected word/stem as described throughout this application may be used for the entry of the phonetic transcription of a word/stem (e.g. hereafter may be referred to as or a phonetic word/stem) for languages such as Chinese or Japanese (e.g. hereafter, may be referred to as a phonetic alphabet). As an example, Chinese language uses Pinyin input method wherein the Chinese characters are represented by the Roman phonetic transcription. A word of a Chinese language may be constituted of one or more characters, each may be represented by a pinyin phonetic transcription (e.g. herein may be referred to as a pinyin representation of a word, or pinyin). According to one embodiment of the invention, a database of pinyin representations of words may be used by the data entry system of the invention. As such, a pinyin representation of a word having more than one syllable may be entered by providing the input information corresponding to said syllable. A word list that may include the corresponding pinyin representations of words may be presented to the user. If the presented word list does not include the desired pinyin, the user may provide a predefined interaction such as a gliding action as described for Roman-based languages (e.g. reject action or next options action), and the system may propose/present a new word list. If needed the user may repeat this procedure until the system proposes the desired word. The user may select a desired pinyin representation of a word within the/a corresponding word list as described earlier (e.g. by tapping on it). The system may preferably fix the characters of the selected pinyin representation of a word, and preferably, may propose longer pinyin representations of words beginning with the fixed characters, and preferably also show the corresponding hieroglyphic words preferably based on their frequency of use. And so on. According to one method, during proceeding to providing the input information corresponding to the next pinyin representation of the desired word, by considering the selected pinyin representation and said input information, the system may propose one or more corresponding pinyin representations of words wherein their first pinyin representation of a word is the selected one. Now, the user may either select one of the new proposed pinyin representations of

words (e.g. as the desired pinyin representation of a word or as a stem of a longer pinyin representations of a words word) or he may continue typing the next one. And so on.

In the current embodiment, according to one method, at any moment (e.g. for each selected pinyin representation of a word) during the entry of a pinyin representation(s) of a word (e.g. after providing information corresponding to the beginning symbols of a word), the user may select its/their corresponding symbol(s) or the user may select all of the symbols of the user's desired word after all of the pinyin(s) of the desired pinyin-based word (e.g. phonetic word) is/are entered.

For the sake of clarity, in the embodiments relating to a hieroglyphic language such as the Chinese or Japanese languages as described herein, a phonetic representation of a word such as a pinyin representation (e.g. as one example for the Chinese language) of a word may be considered as equivalent to a stem of a word and/or a single word in a language with an alphabetic system (e.g. English). As such all principles of the data entry system of the invention may preferably be applied to the entry of input information of a phonetic language for entering phonetic chains of characters (e.g. phonetic words/stems) which may be represented by symbols in the corresponding hieroglyphic language.

  - **Double list**

- **Next applies to both symb/character and pinyin**
  - **Sp applies to symb/character**
  - **Selects a character at any moment**

According to one embodiment, the pinyins corresponding to the input information provided by the user, may be presented on a first predefined location of a screen such as the right side of a screen and the corresponding hieroglyphic symbols may be presented on another predefined location of a screen such the left side of a screen.

According to one embodiment, when the user provides the input information corresponding to a hieroglyphic word, such as a Chinese word, the corresponding predicted phonetic words (e.g. having one or more pinyins in the case of the Chinese language) may be presented in a word list, for example, on the right side of the screen. When a user selects one of said presented phonetic words, by for example tapping on said word, the system may show the corresponding hieroglyphic words at, preferably, another location (e.g. on the left side of the screen). According to a preferred embodiment, a rejecting interaction before selecting a presented phonetic word may result in the system presenting more phonetic words. According to one embodiment, after selecting a phonetic word a same interaction may result in presenting more hieroglyphic words corresponding to the selected phonetic word.

Note that, according to a preferred embodiment, when a user inputs information corresponding to a desired word, the system may preferably show the corresponding phonetic word(s) and preferably show the hieroglyphic words corresponding to the phonetic word having the highest priority in the list. After selecting a phonetic word, the system may propose one or more longer phonetic words beginning with said selected phonetic word. Preferably, after the user selects another phonetic word (e.g. one of the longer phonetic words), the system may show the corresponding hieroglyphic word(s).

The principles of entering phonetic transcription of syllables/words using the data entry system of the invention as described throughout this application, may be applied to any hieroglyphic language such as the Japanese language wherein a phonetic representation of a word is constituted of one or more Kana(s) that may be entered through Roman characters (e.g. using the data entry system of the invention to enter text using the Romaji method).

Picture editing functions/application

- **For a current predicted word or after selecting an already entered word (by press and holding on it), then:**

Methods and principles of editing a picture/image/photo/video have been described before in detail. According to a preferred embodiment of the invention, a method of applying functions to a word being entered (e.g. the current (e.g. predicted) word) or to a selected word which has been previously entered (e.g. an already previously entered word may be selected by providing a predefined interaction such as a long-pressing action on said word) (e.g. hereafter the current word and/or selected word may be referred to as target words) may be considered, such as:

  - **A tap on the screen (e.g. outside the selected word, if any) brings the menu, another same tap hides the menu**
- In the case that a word being entered, a predefined action such as a tapping action (e.g. anywhere outside the keypad and/or corresponding broadly ambiguous zone) on the screen, may display a menu.
- In the case that a previous word is selected, a predefined action, such as a tapping action, may be preferably provided not on the selected word.

- In the case of a targeted word, a predefined action such as a tapping action (e.g. anywhere outside the keypad and/or corresponding broadly ambiguous zone) on the screen, may display a menu. Said predefined action may preferably not be provided on the selected word or on a zone assigned to the selected word.
- After the menu is displayed, an interaction with a function of the menu may apply to the targeted word. Preferably, said application of the function may be executed in real time so that the use can see effect of the function on the targeted word. As an example, said function may be change of the color, font, size, font, shadow, style, etc. of the targeted word.

According to one method, functions other than functions relating to a menu may be applied to a targeted word. For example, in the case of a targeted word on a touchscreen, providing a gesture in a direction may cause the system locate the targeted word under the user's fingers in the direction of the gesture. Preferably, a press-and-holding action anywhere on the screen and a slide of a finger in a direction may cause to move the targeted word in said direction (e.g. preferably from the targeted words original location, or optionally under the user's finger) without changing the trajectory of the targeted word itself. Note that said press-and-holding action with gesture may also be provided on the targeted word itself.

With continuous description of the current embodiment, according to one method, a tapping action on a selected word unselects said selected word. Additionally, in case of a targeted word and during the display of a menu on the screen, according to one method, a predefined action (e.g. such as a tapping action anywhere on the screen (e.g. preferably not on the targeted word)) may hide the menu.

According to one method of the invention, a gliding action on the screen may cause the system to display the keyboard on the screen without a menu being displayed on the screen.

According to one method of the invention, when a gliding action is provided on the screen, the trajectory is shown to the user preferably in the form of a line. In the case of a targeted word, according to one method, in addition to said trajectory or in replacement of said trajectory, the targeted word is displayed.

According to one embodiment of the invention, a complex gliding action such as a sequence of continuous gliding actions may be provided on the screen before enter several words. After entering said several words, the system may preferably display said several words according to the

trajectory of the complex gliding action on the screen. According to one method, the system may assign each of the gliding action trajectories of said complex gliding action to each word of said several words. Optionally, the system may assign trajectories to said to the whole of said complex gliding action, and adjust the trajectories of each word accordingly.

- **Menu for design**
- **Long-press to release the selected word**
    - **Tap anywhere including on the selected word for menu/keyboard**

According to one embodiment of the invention, a long pressing action on a selected text (e.g. one or more words) may preferably release (e.g. unselect) said text. According to this approach preferably a tapping action anywhere on the screen (e.g. preferably outside the broadly ambiguous zone, if a (e.g. corresponding such) keyboard is poped up one the screen) including on a selected text may correspond to displaying the/a menu and/or a/the keyboard. In this embodiment, a tapping action on the/a selected word may preferably not unselect said word.

Downwards, upwards, leftwards, rightwards

Next, previous, erase word from text (holding erases more words), undo

Gesture up/down on the word list

During the entry of a word, the system proposes/predicts words preferably in a word list. According to one embodiment of the invention, a predefined interaction such as a gliding action in a predefined direction such as downwards on/from a predefined location such as on the word list and/or on the zone between the split keys (e.g. on the broadly ambiguous zone), may result the system to propose additional/new words corresponding to the input information provided by the user. Accordingly, another predefined interaction such as a gliding action in a predefined direction such as upwards on/from a predefined location such as on the word list and/or on the zone between the split keys (e.g. on the broadly ambiguous zone), may result the system to propose the previous words (or vise versus, e.g. upwards, and downwards, respectively).

According to one embodiment, a predefined interaction such as a gliding action leftward in/from a predefined zone such as the zone between the split keys and/or on/from the (e.g. zone corresponding to the) word list may preferably correspond to deleting the word being entered and/or a word before the cursor in a corresponding text field. In this example, a gliding action including a holding action may result in deleting more words until the user lift his/her finger (e.g. from the touch screen). Accordingly, said interactions in an opposite direction may preferably correspond to an undo function to reviving of one or more deleted words.

According to one method, a predefined interaction such as a gliding action rightwards on/from (e.g. the zone corresponding to) a word in a/the word list may select and preferably enter said word in the text field. Preferably, the system may, automatically, insert a predefined character

such as a space character after said entered word (e.g. at the cursor/caret position in the text). According to one method, a press-and-hold-and-dragging action on/from the word list my relocate the word list.

Multiple words, after fixing one or more words

- **Is an entry of the database**

As mentioned before, during this application, when an entry of a database may have an N-gram word (e.g. 1-gram, 2-gram, several words, phrase, paragraph, etc.) wherein N is equal and/or greater than 1. As such, after a user fixes a word/stem, the system may propose a (e.g. one or more) word of an entry of the dictionary having N-gram word, wherein they include the fixed stem/word preferably as the beginning characters of them. Additionally, after fixing/selecting a one of the N-gram words, the user may fix/select one of the N-gram words and/or proceed to appending/typing (e.g. and/or deleting) characters to (or from) so that the system may propose one or more longer N-gram word, and so on.

System decides which stems to propose

The principles of a data entry system based on a (e.g. semi-predictive) word prediction system have already been described in detail. According to one embodiment, in such a system (e.g. and/or in a fully predictive system), (e.g. preferably at some point) during the entry of a word, the system (e.g. automatically and/or based on user's demand) may present to the user stems (e.g. the beginning portion of a word) corresponding to at least some of the word (e.g. preferably, corresponding to all of the word) corresponding to the input information provided until then. Preferably, the length of the said stems is equal to the length of the characters corresponding to the input information provided until then. Preferably, said stems are shown in a display control (e.g. word list) to the user. Preferably, said stems are shown to the user if their number satisfies a predefined criterion/criteria (e.g. if their number does not exceed a predefined number such as the maximum number of the words allowed in the word list, or if their number equals a predefined number of words). Preferably, the stems are shown in the same display control (e.g. word list) location/zone that is used for proposing/displaying predicted words during the entry of a word.

With continuous description of the current embodiment, as an example, by considering the keypad of the fig. 447A, during the entry of a word using the semi-predictive system, after the user presses precisely on the letters "d", "e", "l", "i", and then taps one time on the broadly ambiguous zone between the keys so that said tapping action may ambiguously correspond to any of the characters assigned to said zone, the system may not be able to find a word in the database used by the system wherein its length and its characters correspond to the input information provided by the user. At this time, the system may look for the words where their (e.g. beginning) characters correspond to the input information provided by the user, and may preferably propose the (e.g. beginning) chain of characters (e.g. of the word) to the user. In this example, the corresponding chain of characters is preferably limited to a few characters such as

- "deliv" (e.g. beginning stem of the words, "deliver", "deliveryman", "delivers", etc.)

- "delib" (e.g. beginning stem of the words, "deliberate", "deliberately", "deliberation", etc.)
- "delic" (e.g. beginning stem of the words, "delicious", "delicate", "delicacy", etc.)
- "delim" (e.g. beginning stem of the words, "delimit", "delimiting", "delimited", etc.)
- "delig" (e.g. beginning stem of the words, "delight", "delightful", "delightfully", etc.)

The system may propose some (e.g. at least one) of the stems (e.g. in the word list) to the user. If the number of different corresponding stems is more than the maximum number of words permitted in the word list, then the system may show some (e.g. at least one) of the stems, and the system may present more stem(s)/option(s) when/if required. Note that, in a same word list the system may simultaneously, present words and/or stems corresponding to the input information provided until then. According to another method, the complete words and/or stems may be presented in two different display controls such as word lists (e.g. on different zones of a touch screen).

Figs. 447A-447C, show the keypad of the invention in different instances (e.g. respectively, semi-predictive mode, precise combined letter and symbol mode (e.g. activated when providing a gliding action on/from the semi-predictive keys), and precise letter mode) in the semi-precise mode. Preferably, the keypad of the invention in both, semi-predictive and fully predictive, modes have the same appearance. In the fully predictive mode, preferably, the user is allowed to (e.g. may) tap anywhere on the keys to enter ambiguous characters. In semi-predictive mode, preferably, the user is required to tap precisely on the letters of the keys. In any mode (e.g. semi-predictive mode and fully predictive mode), for the entry other characters (e.g. non-preferred characters) the user may tap on a predefined zone (e.g. broadly ambiguous zone) preferably between the keys. Zones assigned to the characters on a key in semi-predictive mode may be defined using various methods of assignment. For example, as shown in fig. 447A, the section/zones assigned to the letters on keys 447001 and 447002 are defined differently, as highlighted by the black lines on said keys.

Constructing a WALL

Id number for A PUZZLE

Constitutes a picture

Constitutes typing on a picture

Piece is missing

Writing is missing

On our server

Linear or non linearcpieces

Any other kind of picture

Drawing disappears after typing

Password

Manner of monetizing

Coupon

Paid by advertiser

Coca cola

diff size wall diff price

same type, mix

wall of pictures

on facebook, youtube, independent, a single webpage

According to one embodiment of the invention, the system may enable the user to identify/select one or more portion(s) of an image (e.g. whether edited or not) and share it with one or more party/parties. According to one method, the identified/selected portion(s) of the image, may be the only portion(s) enabled for editing (e.g. entering text/graphic elements, etc.). According to a second method, the identified/selected portion(s) may be the only portions of the image that are not enabled for editing. According to one embodiment, the principles just described may be used in an application (e.g. having the data entry system of the invention and) using a server that may be employed to control the said enablement/disablement of editing an image. According to another method, some portion(s) may be enabled for editing, and some (e.g. one or more) portions (e.g. of the same image) may be disabled for editing. According another method, any of enablement and/or disablement may be alternated/switched. According another method, more portion(s) may be added at any time, and any of exiting portion(s) may be removed.

As an example, Figure 441A shows an image 44100 wherein the portions 441001-441005 are selected by the user for editing purposes. The rest of the image are disable from an editing action. For selection/identification purposes, a means, preferably in a menu, may be available to the user so that by using said means the user may select said one or more portion(s) of the image. As an example, the user may draw may a shape/form (e.g. a square or other shape) as shown in Figure 441A to identify/select said portions. According to one method, said selection procedure may be provided without interacting with a means in a menu, while according to another method the user may interact with a means in a menu before providing shape/form. Said means in a menu may define enabling/disabling purpose of the selected portions. Preferably, for each of enabling and disabling purposes, a different means in a menu is designated. In the example of Figure 411A, the selected portion(s) are designated to be enabled for editing, and the rest of the image is disabled for editing. In figure 411B, the portions 441103, 441104, and 441105, which are edited, correspond to the selected portions 441003, 441004, and 441005 of Figure 441A, respectively. Other portions are not yet edited.

Figure 442A shows a selected portion 442001 of an image 442000 wherein said portion is disabled for editing. The rest of the image is enabled for editing. In this example, several

comments/texts are edited into the image by one or more users. In this example, a split comment, having two portions 4421011 and 4421012, is a single comment that was typed on the image but was (e.g. manually or automatically) split because the portion 442001 prevented it from being printed in a continuous area where portion 442001 was located.

With continuous description of the current embodiment, note that in a preferred method, when a user shares an image having selected portions, said portions are marked by some means, for example, by a line/contour. After editing content in said portion(s), said marking means may disappear. According to a method, in order to have access to a selected portion (e.g. or the rest of the image if the selected portion is disabled for editing) for editing, the editing party (e.g. someone who receives said image) may require an access control means such as a login (e.g. username and/or password) to edit said portion(s)/image. For monetizing purposes, in some cases, the provision of said access control may require payment.

With continuous description of the current embodiment, any portion of an image may be shared separately from the rest of the image with a designated user, and access control may be applied to that portion. Such portion(s), after being edited by the designated user, may be transmitted to a (e.g. remote) server which may assemble the received portions into a (e.g. single) image(s). According to one method, the assembled image may not include the portions that may not yet be edited. While, according to another method, the assembled may also include the non-edited portion. Any of said assemble images, may at any moment be accessed by any user. According to one method, a user may identify themselves as the editor of any portion of an assembled image. Note that, one or more protion(s) of said image may be edited by the user who shares said image. According to one method, each of said portions may be auctioned (e.g. online) and preferably control by some access means. Figure 443A shows an image 443000 that is partitioned (e.g. manually by a user or automatically) into several portions (e.g. 443001, 443002, 443003, and others not numbered in the figure). In Figure 443B, the portions 443001 and 443003 are edited, while the remaining portions are not edited, but users can see the entire image at any moment. In figure 443C, only edited portions are shown to a user(s).

Constructing a WALL

Virtual walls such as a facebook walls and/or feeds, are very popular today. In such so-called "walls" the content such as text and user identification pictures are provided on different text fields or other corresponding image backgrounds that have no relation with a wall that we are used to image. The image editing principles described in this application may allow typing on images in form of a wall and/or forming a wall. As an example, a user may post a subject (e.g. including text) on an image and said image may be shared with others on a page such as a web-page. Other users may comment/respond to the posted subject on preferably similar image. The similar image may be provided by the user posting the subject by a third party such as a server sharing/providing images such as the server controlling the page. The image of the posted subject

and/or the images including comments to the posted subject may be positioned next to each other on the shared page. Preferably, the posted subject and/comments may be positioned in a linear manner, preferably, vertically. In this case, as an example, they may form/construct at least a substantially single image. If each of said images is the image of a wall (e.g. China's, Berlin, or a building wall), the combination of said images on the shared page may form a single wall with many comments making it a pleasant and fun. It also may permit better visualation of the comments. According the one embodiment, any location on the constructed image (e.g. wall) may be accessed freely or by means of permission (e.g. as described before) for posting a comment.

Fig. 444 shows as an example, a "wall" in a current social application such as Facebook using the image editing principles/application as described. In this example, a user 444011 has typed a subject 444007 on an image 444001 such as the image of a wall and shared in his facebook page. In this example, the image of the user himself and/or his corresponding personal information are located outside the image (e.g. because Facebook application requires it). In this example, under said image, posts 444002, 444003, from other user 444012, 444013, responding to the posted subject image 444001, are positioned in a vertical manner. The overall page/wall substantially forms a single image/wall with a single debated subject with a small gap between each image.

In a preferred embodiment, the information corresponding to the poster of the subject and the responding users may be positioned/printed on their corresponding images so that to at least minimize the gap between images. In the example of Fig. 444A, each of the images 444101, 444102, and 444103, include information from its respective poster, 444111, 444112, or 444113. In this example, a very reduced gap separates the images, while in Fig. 444B, no gap is provided between image and they form a single image 444200.

According to one embodiment, the images posted by users may not resemble each other, but preferably may have common characteristic(s). In figure 445, a portion 445002 of the wall 445000 has the image of a wall which may be different from other portions (445001 and 445003) of the wall 445000.

The principles of commenting on a subject while constructing an image such as a wall may be used with/in any type of (e.g. social) application and/or platform/service such as Facebook, YouTube, etc.

Several (linear/vertical) pieces

According to one method, a single image may be divided into pieces, preferably linear (e.g. vertical or horizontal) pieces and the pieces may be shared with a number of users. Note that, preferably, each of said pieces may have a different portion of the image which may not necessarily resemble another portion of the image. Because a single image is divided into several portions, the number of portions is generally limited to fixed predefined number. In order to divide an image into several portions, a means such as those described before or some automatic means may be used. As an example, the user may divide the image by drawing lines on the image or the user may instruct the system to automatically divide in to a random number or desired number of portions.

According to one method, an admin user may share any of the portion(s) with other users by the admin user's control of the image, or the admin user may allow other users to select a portion available (e.g. from an entire image and the corresponding portions that may be shown to a user, for example, on a web page) to edit, by preferably sharing the entire image.

According to one method, the portions of a divided image may be available in a linear sequential manner. Preferably, the first portion may be edit by the admin user or another user and the next (e.g. second) available portion is preferably the portion adjacent to the first portion, and the third available portion is preferably the portion adjacent to the second portion, and so on. As mentioned before, according to a preferred method, at least one of said portions may be available to a user by means of access control (e.g. that may be defined and/or granted based on monetary system such as a credit/point/reward system, or payment system). As such, advertisers, celebrities, corporations, consumers may use these principles to monetize and/or market and/or advertise their brands, products, services, etc. through images.

As an example, figure 446 shows an image 446000 divided into five portions by means of drawing lines such as the line 446001. The portion(s) of the image may be available to some users as described before. In this example, the first portion of the image is edited by the admin user. Figure 446A shows a comment/post on the second portion of image provided by a user acquiring control of the second portion. According to one method, the combined edited portions 446100 may be provided on a page, such as a web page, so as to be seen by others, as shown in figure 446A. In Figure 446B, a third comment/post provide by another user and the combined three portions 446200 are shown. In Figure 446C, the whole edited image 446300 including all of the portions including all the comments/posts provided by several users is shown.

Note that, as shown, the divided portions may have different size.

Any keyboard

Note that, the principles of editing (such as typing text/comments) and sharing pictures/images as described throughout this application may use any type of keyboard such as the keyboard of the invention having few keys such as four keys (e.g. and zone outside of said keys) or a QWERTY-like keyboard.

Fig. 448A shows another type of configuration/assignment of letters to the keys 448001-448004 of the keypad of the invention. In this example, the letters on two adjacent keys are arranged such that to have at least vertically large distance from each other. To enhance the accuracy, the zones assigned to each letter (e.g. in a same row/column) are defined such that a portion of a zone of a first key (e.g. which is closer to a letter/character assigned to a second key/zone than to a letter which is assigned to a first key) may be assigned to a character of said second key/zone. In this example, the zones 448011, 448012, 448013, and 448014 are respectively assigned to the letters "S", "R", "T", and "N".

As mentioned before, instead of assigning several zones on a key to respectively each of several (e.g. preferred) characters, each of said characters may be assigned to a (e.g. an independent) key/zone on the screen. Fig. 449A shows a type of a keyboard including twelve independent

keys/zones corresponding to preferred characters which in this example are split into two portions 449001 and 449002, and a zone 449007 (e.g. broadly ambiguous zone) outside said keys assigned to a (e.g. large) number of characters such as, for example, at least the non-preferred characters as described throughout this application. In this example, the letter keys constitute four columns.

Fig. 449B shows a keypad with similar principles wherein its letter keys form two (e.g. horizontal) rows of keys. In this example, the letter keys are split into two portions and a (e.g. broadly ambiguous) zone 449107 is positioned between the two portions of keys.Note that, as shown in the examples above and demonstrated in fig. 448A, a (e.g. zone assigned to a) letter (e.g. "A") of a first row 448021 adjacent to a second row 448022 may (e.g. also) preferably be arranged (e.g. located) such that to be between two (e.g. zones assigned to two) letters (e.g. "W", and "N") of the second row 448022. As such, preferably for better accuracy, interacting with a portion/zone 448115 of the second row between said two letters wherein said portion is closer to the letter of the first row, may preferably (e.g. also) be assigned/correspond to the letter of the first row. Other types of configuration of letters/characters (e.g. based on the principles described) on keys/zones may be considered by people skilled in the art.

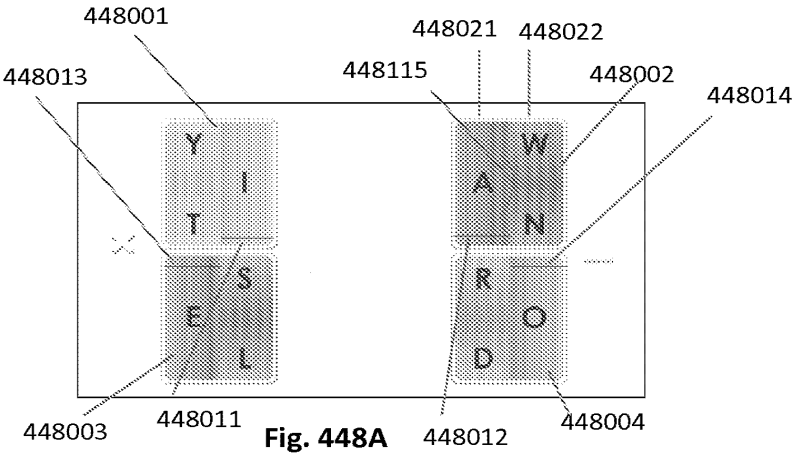

Fig. 448A

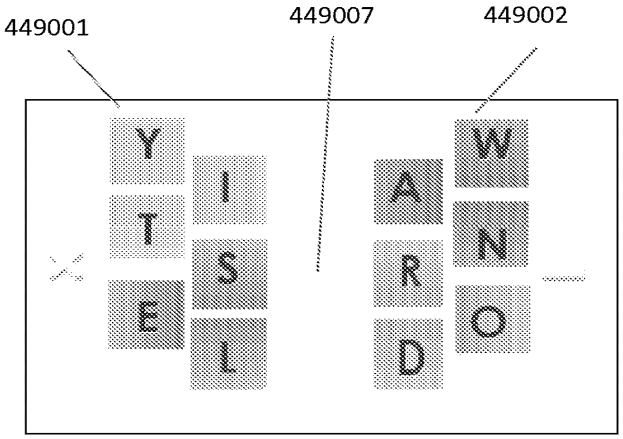

Fig. 449A

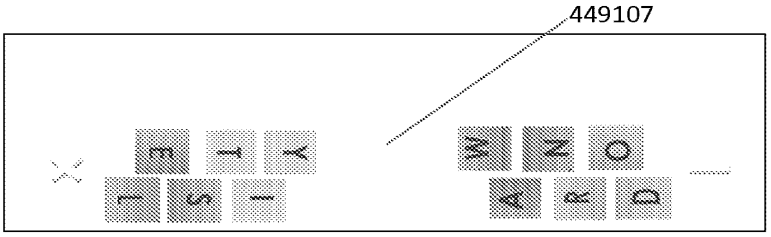

Fig. 449B

SCORE Placeholder Sheet for IFW Content

Application Number: 61778888 Document Date: 03/13/2013

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

- Drawings – Other than Black and White Line Drawings

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

To access the documents in the SCORE database, refer to instructions developed by SIRA.

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- Examiners may access SCORE content via the eDAN interface.
- Other USPTO employees can bookmark the current SCORE URL (http://es/ScoreAccessWeb/).
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Form Revision Date: February 8, 2006