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61/553,554 31 October 2011 (31.10.2011) US(71) Applicant (for all designated States except US): **THE FLORIDA STATE UNIVERSITY RESEARCH FOUNDATION, INC.** [US/US]; 2000 Levy Avenue, Building A, Suite 351, Tallahassee, Florida 32310-5792 (US).

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(54) Title: SYSTEM AND METHODS FOR ANALYZING AND MODIFYING PASSWORDS

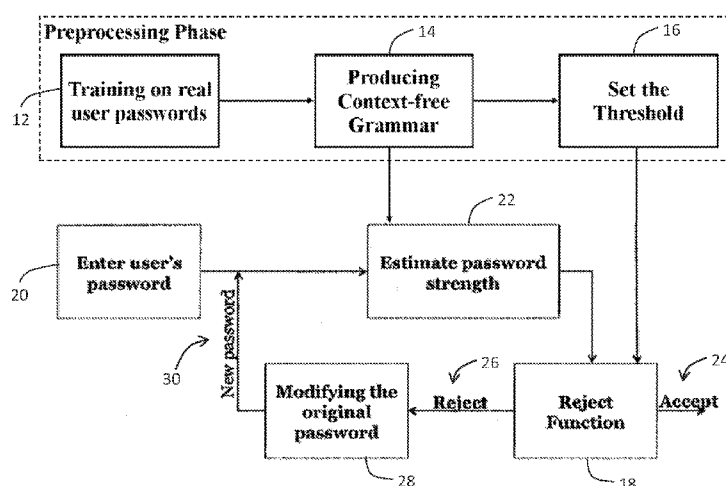


FIG. 1

(57) Abstract: A system for analyzing and modifying passwords in a manner that provides a user with a strong and usable/memorable password. The user would propose a password that has relevance and can be remembered. The invention would evaluate the password to ascertain its strength. The evaluation is based on a probabilistic password cracking system that is trained on sets of revealed passwords and that can generate password guesses in highest probability order. If the user's proposed password is strong enough, the proposed password is accepted. If the user's proposed password is not strong enough, the system will reject it. If the proposed password is rejected, the system modifies the password and suggests one or more stronger passwords. The modified passwords would have limited modifications to the proposed password. Thus, the user has a tested strong and memorable password.





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A. CLASSIFICATION OF SUBJECT MATTER**G06F 21/46(2013.01)i**

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G06F 21/46; H04L 9/28; G06F 12/14; H04L 9/06; H04L 9/32; H04L 9/00; G06F 21/00

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords:password, probabilistic, context-free, grammar, policy, rule, threshold, complexity, derive, compare, first, second, and similar terms.**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2009-0150677 A1 (SRINIVAS VEDULA et al.) 11 June 2009 See paragraphs 22, 26-27, 43, 45, 57, 60; figures 1, 4; and claims 3, 7.	1-18
A	US 2008-0288781 A1 (RICHARD LEE LAWSON et al.) 20 November 2008 See paragraphs 19-21; figure 2B; and claims 1-2.	1-18
A	US 2011-0252243 A1 (MICHAEL LAMBERTUS HUBERTUS BROUWER et al.) 13 October 2011 See paragraphs 64-78; and figures 2-5.	1-18
A	US 2008-0063192 A1 (LOUIS GOUBIN et al.) 13 March 2008 See paragraphs 39-90; and figure 1.	1-18
A	US 2010-0299727 A1 (SCOTT MORE et al.) 25 November 2010 See paragraphs 41-57; and figures 2-5.	1-18



Further documents are listed in the continuation of Box C.



See patent family annex.

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"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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