(12) **INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)**

(72) **Inventors; and**
(75) **Inventors/Applicants** *(for US only)*: **XU, Bin** [US/US]; 955 La Mesa Terrace, Unit 1, Sunnyvale, CA 94086 (US). **SESMA, Jim** [US/US]; P. O. Box 2690, White City, OR 97503 (US). **FREEMAN, Robert** [US/US]; 333 North Glassell #9393, Orange, CA 92866 (US). **LI, Weijun** [CN/US]; 687 Ontario Court #8, Sunnyvale, CA 94087 (US).
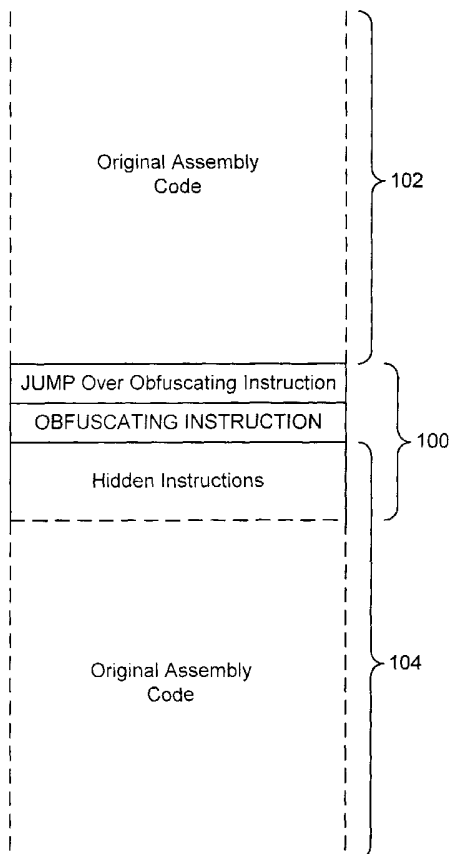
(74) **Agents: NWAMU, Fidel** et al.; Townsend and Townsend and Crew LLP, Two Embarcadero Center, Eighth Floor, San Francisco, CA 94111-3834 (US).

(54) **Title:** SYSTEM FOR OBFUSCATING COMPUTER CODE TO PREVENT DISASSEMBLY

(57) **Abstract:** A system for preventing accurate disassembly of computer code. Such code masking, referred to as "obfuscation," is useful to prevent unwanted parties from making copies of an original author's software, obtaining valuable information from the software for purposes of breaking into a program, stealing secrets, making derivative works, etc. The present invention uses assembly-language instructions so as to confuse the disassembler to produce results that are not an accurate representation of the original assembly code. In one embodiment, a method is provided where an interrupt, or software exception instruction, is used to mask several subsequent instructions. The instruction used can be any instruction that causes the disassembler to assume that one or more subsequent words, or bytes, are associated with the instruction. The method, instead, jumps directly to the bytes assumed associated with the instruction and executes those bytes for a different purpose. A preferred embodiment works with a popular Microsoft "ASM" assembler language and "DASM" disassembler. The instructions used to achieve the obfuscation include "INT" instructions. Using this approach up to 17 bytes of obfuscation can be achieved with five instructions. Each instruction remains obfuscated until executed and returns to an obfuscated state afterwards.

patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

(88) Date of publication of the international search report:
8 May 2003

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06F1/00

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)
IPC 7 G06F

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

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

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Y		6-8
A	page 571, right-hand column, line 12 -page 572, left-hand column, line 18 page 576, left-hand column, last line -right-hand column, last line page 577, right-hand column, line 17 - line 31	4,10,11
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[X] Further documents are listed in the continuation of box C.   [X] Patent family members are listed in annex.

Date of the actual completion of the international search	Date of mailing of the international search report
20 January 2003	31/01/2003

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Carciofi, A

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
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