

Title (en)  
INTELLIGENT CODE DIFFERENCING USING CODE CLONE DETECTION

Title (de)  
INTELLIGENTE CODEUNTERScheidung MITTELS KLONNACHWEIS

Title (fr)  
DIFFÉRENCIATION DE CODE INTELLIGENTE À L'AIDE D'UNE DÉTECTION DE CLONE DE CODE

Publication  
**EP 2652621 A4 20140820 (EN)**

Application  
**EP 10860883 A 20101215**

Priority  
CN 2010079801 W 20101215

Abstract (en)  
[origin: WO2012079230A1] The subject disclosure relates to systems and methods for intelligent code differencing employing code clone detection technology. A large, complex source code change (e.g., moving and renaming functions across source files) may involve edits in multiple source files. As such, developers and/or code reviewers may have a difficult time identifying the large and complex changes, and determining which changes are most significant, using existing code differencing tools. Using code clone detection technology, different types of changes, either across source files or inside a particular source file may be determined. The changes can be categorized as new, duplicated, and deleted code snippets or functions, and moved, renamed or modified functions. For changes categorized as duplicated or modified, further categorization by the level of importance of the change can be made. For example, the change can be trivial, minor or significant. Visualization of the changes further provides intuitive understanding of the changes.

IPC 8 full level  
**G06F 11/28** (2006.01)

CPC (source: EP KR)  
**G06F 8/62** (2013.01 - KR); **G06F 8/63** (2013.01 - KR); **G06F 8/71** (2013.01 - KR); **G06F 8/751** (2013.01 - EP KR)

Citation (search report)  
• [A] MIRYUNG KIM ET AL: "Automatic Inference of Structural Changes for Matching across Program Versions", 29TH INTERNATIONAL CONFERENCE ON SOFTWARE ENGINEERING (ICSE'07), 1 May 2007 (2007-05-01), pages 333 - 343, XP055127981, ISSN: 0270-5257, ISBN: 978-0-76-952828-1, DOI: 10.1109/ICSE.2007.20  
• [X] FEROSH JACOB ET AL: "Actively comparing clones inside the code editor", PROCEEDINGS OF THE 4TH INTERNATIONAL WORKSHOP ON SOFTWARE CLONES, IWSC '10, 1 January 2010 (2010-01-01), New York, New York, USA, pages 9 - 16, XP055127885, ISBN: 978-1-60-558980-0, DOI: 10.1145/1808901.1808903  
• [X] PETER WEISSGERBER ET AL: "Identifying Refactorings from Source-Code Changes", AUTOMATED SOFTWARE ENGINEERING, 2006. ASE '06. 21ST IEEE/ACM INTERNATIONAL CONFERENCE ON, IEEE, PI, 1 September 2006 (2006-09-01), pages 231 - 240, XP031021412, ISBN: 978-0-7695-2579-2  
• [A] DAQING HOU ET AL: "Proactively managing copy-and-paste induced code clones", SOFTWARE MAINTENANCE, 2009. ICSM 2009. IEEE INTERNATIONAL CONFERENCE ON, IEEE, PISCATAWAY, NJ, USA, 20 September 2009 (2009-09-20), pages 391 - 392, XP031557805, ISBN: 978-1-4244-4897-5  
• [A] VAN RYSELBERGHE F ET AL: "Reconstruction of successful software evolution using clone detection", SOFTWARE EVOLUTION, 2003. PROCEEDINGS. SIXTH INTERNATIONAL WORKSHOP ON PRINCIPLES OF 1-2 SEPT. 2003, PISCATAWAY, NJ, USA, IEEE, 1 September 2003 (2003-09-01), pages 126 - 130, XP010656987, ISBN: 978-0-7695-1903-6  
• See references of WO 2012079230A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2012079230 A1 20120621**; CA 2820758 A1 20120621; CA 2967251 A1 20120621; CA 2967251 C 20200407; CN 103262047 A 20130821; CN 103262047 B 20161116; EP 2652621 A1 20131023; EP 2652621 A4 20140820; JP 2013546090 A 20131226; JP 5775599 B2 20150909; KR 101732764 B1 20170504; KR 20140001951 A 20140107

DOCDB simple family (application)  
**CN 2010079801 W 20101215**; CA 2820758 A 20101215; CA 2967251 A 20101215; CN 201080070705 A 20101215; EP 10860883 A 20101215; JP 2013543486 A 20101215; KR 20137015514 A 20101215