

Title (en)  
METHOD AND APPARATUS FOR USING ENTROPY IN ANT COLONY OPTIMIZATION CIRCUIT DESIGN FROM HIGH LEVEL SYSTHESIS

Title (de)  
VERFAHREN UND VORRICHTUNG ZUR VERWENDUNG EINER ENTROPIE ZUM ENTWURF EINER OPTIMIERUNGSSCHALTUNG FÜR EINE AMEISENKOLONIE AUS EINER SYNTHESE HOHER ORDNUNG

Title (fr)  
PROCÉDÉ ET APPAREIL PERMETTANT D'UTILISER L'ENTROPIE DANS UN CONCEPT DE CIRCUIT D'OPTIMISATION DU TYPE COLONIE DE FOURMIS À PARTIR D'UNE SYNTHÈSE DE HAUT NIVEAU

Publication  
**EP 2622549 A4 20140423 (EN)**

Application  
**EP 11832913 A 20110831**

Priority  
• US 89490210 A 20100930  
• US 89484210 A 20100930  
• US 89475610 A 20100930  
• US 2011050081 W 20110831

Abstract (en)  
[origin: WO2012050678A1] A method and apparatus for using entropy in ant colony optimization circuit design from high level synthesis is described. In one example, an operation to be performed by a circuit is selected. A plurality of hardware components for performing the operation are represented with a data flow graph having edges and nodes. A plurality of solutions for performing the operation are simulated as hardware component combinations represented as paths on the data flow graph. For each solution the cost including a number of edges and nodes traversed on the data flow graph and a supplemental sub-integer cost is determined and a solution is selected with the lowest cost as a hardware component combination for a circuit.

IPC 8 full level  
**G06Q 10/00** (2012.01); **G06F 17/50** (2006.01)

CPC (source: EP)  
**G06F 30/34** (2020.01); **G06Q 10/06** (2013.01); **G06Q 50/04** (2013.01); **G06F 2111/06** (2020.01); **Y02P 90/30** (2015.11)

Citation (search report)  
• [I] US 7284228 B1 20071016 - HARATSARIS PHILIP R [US]  
• [XI] GANG WANG ET AL: "Ant Colony Optimizations for Resource-and Timing-Constrained Operation Scheduling", IEEE TRANSACTIONS ON COMPUTER AIDED DESIGN OF INTEGRATED CIRCUITS AND SYSTEMS, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 26, no. 6, 1 June 2007 (2007-06-01), pages 1010 - 1029, XP011180071, ISSN: 0278-0070, DOI: 10.1109/TCAD.2006.885829  
• See references of WO 2012050678A1

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 2012050678 A1 20120419**; CN 103140853 A 20130605; EP 2622549 A1 20130807; EP 2622549 A4 20140423

DOCDB simple family (application)  
**US 2011050081 W 20110831**; CN 201180047603 A 20110831; EP 11832913 A 20110831