Title (en)

METHOD FOR DATA PROCESSING AND PROGRAMMABLE LOGIC CONTROLLER

Title (de)

VERFAHREN ZUR DATENVERARBEITUNG UND SPEICHERPROGRAMMIERBARE STEUERUNG

Title (fr)

PROCÉDÉ DE TRAITEMENT DE DONNÉES ET COMMANDE À PROGRAMME ENREGISTRÉ

Publication

EP 3861440 A1 20210811 (DE)

Application

EP 19786777 A 20191010

Priority

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• EP 2019077497 W 20191010

Abstract (en)

[origin: WO2020074650A1] The invention relates to a method for optimizing data processing in a programmable logic controller (PLC). The PLC has a control task, which comprises a plurality of executable programs. At least two programs of the control task each have at least one parallel processing portion having a work package having a plurality of sub-tasks. The parallel processing portions in the respective programs are assigned a priority having a specified priority level. The particular priority levels are inserted into a data structure as soon as execution of the program has reached the parallel processing portion. At least one parallel processor core checks if there are entries in the data structure and, if there are entries, said parallel processor core completes sub-tasks from the work package of the program that has a priority level in the first position of the entries in the data structure. During a program cycle, an expected computing throughput of the control task is continually evaluated and at least one of the priority levels of the parallel processing portions of the respective programs is dynamically modified if the computing throughput of the control task is increased thereby.

IPC 8 full level

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CPC (source: EP US)

G05B 19/054 (2013.01 - US); **G05B 19/056** (2013.01 - US); **G06F 9/48** (2013.01 - US); **G06F 9/4806** (2013.01 - US); **G06F 9/4831** (2013.01 - EP); **G06F 9/4843** (2013.01 - US); **G06F 9/4881** (2013.01 - EP US); **G06F 9/50** (2013.01 - US); **G06F 9/5027** (2013.01 - US); **G06F 9/5038** (2013.01 - EP); **G06F 9/5066** (2013.01 - EP); G06F 2209/483 (2013.01 - EP US); G06F 2209/5021 (2013.01 - EP US)

Citation (examination)

• US 2016124770 A1 20160505 - BOUCHARD GUILLAUME [FR], et al
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• ANONYMOUS: "Speicherprogrammierbare Steuerung ?", WIKIPEDIA, 19 September 2018 (2018-09-19), pages 1 - 13, XP055825093, Retrieved from the Internet <URL:https://de.wikipedia.org/w/index.php?title=Speicherprogrammierbare_Steuerung&oldid=181037612> [retrieved on 20210716]
• See also references of WO 2020074650A1

Designated contracting state (EPC)

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DOCDB simple family (application)

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