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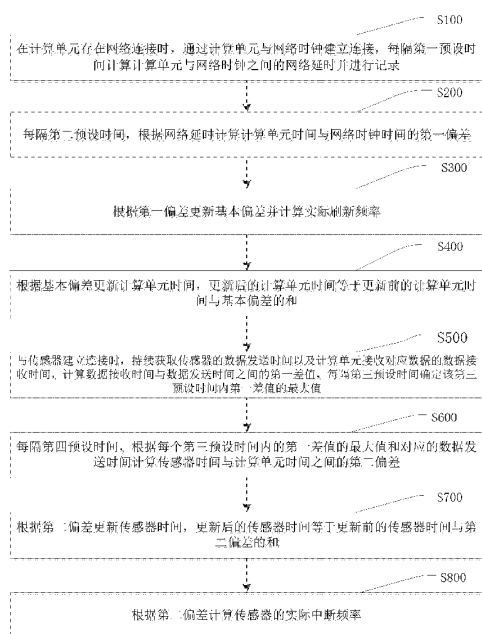
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(54) Title: CLOCK CRYSTAL OSCILLATOR SYNCHRONIZATION METHOD, APPARATUS AND SYSTEM

(54) 发明名称: 一种时钟晶振同步的方法、装置及系统



S100 When a calculation unit is in a network connection, establish a connection between the calculation unit and a network clock, so as to calculate a network time delay between the calculation unit and the network clock at intervals of a first preset time, and record the network time delays

S200 Calculate, according to the network time delay, a first deviation between the time of the calculation unit and the time of the network clock at intervals of a second preset time

S300 Update a basic deviation according to the first deviation, and calculate an actual refresh frequency

S400 Update the time of the calculation unit according to the basic deviation, wherein an updated time of the calculation unit is equal to the sum of the time of the calculation unit before the update and the basic deviation

S500 When a connection is established with a sensor, continuously acquire a data sending time of the sensor, and a data receiving time of the calculation unit receiving corresponding data, calculate a first difference between the data receiving time and the data sending time, and determine, at intervals of a third preset time, the maximum value of the first difference within the third preset time

S600 Calculate, at intervals of a fourth preset time, a second deviation between the time of the sensor and the time of the calculation unit according to the maximum value of the first difference within the third preset time and a corresponding data sending time

S700 Update the time of the sensor according to the second deviation, wherein an updated time of the sensor is equal to the sum of the time of the sensor before the update and the second deviation

S800 Calculate an actual interruption frequency of the sensor according to the second deviation

图 1

(57) Abstract: The present application relates to a clock crystal oscillator synchronization method, apparatus and system. The method comprises: when a calculation unit is in a network connection, calculating a first deviation between the time of the calculation unit and the time of a network clock; updating a basic deviation according to the first deviation; updating the time of the calculation unit according to the basic deviation, and calculating an actual refresh frequency; calculating a second deviation between the time of the calculation unit and the time of a sensor; and updating the time of the sensor according to the second deviation, and calculating an actual

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WO 2023/082620 A1

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interruption frequency of the sensor. The present application provides a synchronization method in terms of calculation, assessment, correction and compensation for a time error caused by a clock crystal oscillator, and has the effect of reducing a time error when data exchange is performed between each of one or more sensors and each of one or more calculation units.

(57) 摘要: 本申请涉及一种时钟晶振同步的方法、装置及系统, 其中方法包括在计算单元存在网络连接时, 计算计算单元时间与网络时钟时间的第一偏差; 根据第一偏差, 更新基本偏差; 根据基本偏差更新计算单元时间并计算实际刷新频率; 计算计算单元时间与传感器时间的第二偏差; 根据第二偏差, 更新传感器时间并计算传感器的实际中断频率。本申请对于由时钟晶振引起的时间误差提供了计算、评估、校正、补偿的同步方法, 具有减小在单个或多个传感器与单个或多个计算单元进行数据交换时减少时间误差的效果。