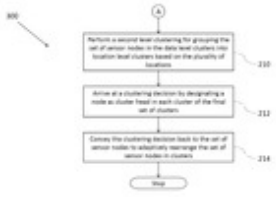
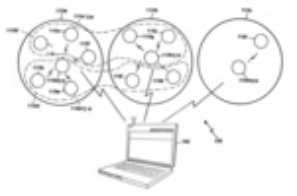


特許ファミリー - 142 検索結果

#	  Title	Publication number	Publ. Date	Applicant / Assignee			
1.	Method and system for achieving auto-adaptive clustering in a sensor network	WO2017 / 195089	2017-11-16	 TATA CONSULTANCY SERVICES	100%		
System And Method A For Achieving Auto- Adaptive Clustering In A Sensor Network Has Been Explained. The System Performs A Hierarchical Clustering In Sensor Networks To Maximize The Lifetime Of The Network . The System Includes A Set Of Sensor Nodes And A Sink Node. The Clusters in sensor networks are formed automatically from a large number of deployed nodes where the cluster characteristics are driven by the measurement requirements defined by the end-user.The system also employs a clustering algorithm to achieve adaptive clusteringThe processor further includes a first level clustering module for grouping the set of sensor nodes into data level clusters based on the measurements.The processor further includes a second level clustering module for grouping the set of sensor nodes in the data level clusters into the location Level clusters based on location.In another embodiment, that clustering can go on to more than two levels.							
2.	Adaptive distributed node re- clustering method in mobile wireless sensor network	CN105263149	2016-01-20	 SHANGHAI JIAO TONG UNIVERSITY	85%		
The invention provides an adaptive distributed node re- clustering method in a mobile wireless sensor network .The method increasing steps that, in a clustered mobile wireless sensor network , the position of a node at each time in a movement process is accurately estimated by the node itself by utilizing a track reckoning method and a particle filtering algorithm according to data of an inertia sensor ; at the beginning of each re- clusteringperiod, the position of the node at the next time is reasonably predicted according to a motion model followed by the node and the position of the present time, a non cluster head node at a boundary portion in each cluster is permitted to re-cluster according to position information of other nodes in the network , so the node in a movement process is guaranteed to constantly be in a proper cluster, namely, a communication distance between the node and a cluster head node of the present location cluster is kept to be in a reasonable scope, a relatively high data transmission rate between the two nodes during communication can be realized, and thereby service quality of the mobile wireless sensor network can be guaranteed.							
3.	Method for low-energy adaptive clustering hierarchy	US7035240	2006-04-25	 MIT-MASSACHUSETTS INSTITUTE OF TECHNOLOGY	85%		
Method And A Network Architecture For Implementing An Energy Efficient Network . The Network Includes A Plurality Of Nodes That Collect And Transmit Data That Are Ultimately Routed To A Base Station. The Network Nodes Form A Set Of Clusters With A Single Node Acting As A Cluster- head.The cluster-head advertises for nodes to join its cluster, schedules the collection of data within a cluster, and then transmit the data to the base station.A cluster can intelligently combine data from individual nodes.After a period of operation, the clusters are reformed with a different set of nodes acting as cluster-heads.The network provides an increased system lifetime by balancing the energy use of individual nodes.							

Four. Apparatus and method for time synchronization in underwater wireless sensor network

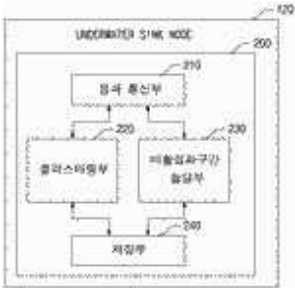
KR20110045627

2011-05-04

KANGNUNG WONJU NATIONAL UNIVERSITY INDUSTRY ACADEMY COOPERATION

79%

PURPOSE: An apparatus and method for synchronizing time in an underwater wireless **sensor network** are provided to perform time synchronization in consideration of the characteristics of an underwater communication environment in the underwater wireless **sensor network**.
CONSTITUTION: A **clustering** unit(220) sequentially transfers a synchronization request message in the predetermined plural directions through a sound wave communication unit, and configures a cluster of underwater **sensor** nodes which transfer a response message for the synchronization request message. A sleep interval allocating unit(230) allocates a sleep section for each underwater **sensor** node within an entire sound wave communication cycle during which the underwater **sensor** node collects sensing information through the cluster, wherein the underwater **sensor** node constitutes the cluster.
COPYRIGHT KIPO 2011



5. Adaptive substation wireless sensor network access communication system

CN107396286

2017-11-24

JIANGSU ELECTRIC POWER RESEARCH INSTITUTE
STATE GRID CORPORATION OF CHINA (SGCC)
STATE GRID JIANGSU ELECTRIC POWERCOMPANY RESEARCH INSTITUTE
SUZHOU AOKUILA ELECTRONICS SCIENCE

78 %

The invention discloses an **adaptive** substation wireless **sensor network** access communication system. The system comprises a near field communication automatic searching module for automatically finding and accessing various **sensor** networks; a near field communication data access module for matching channels in the **sensor network** and a substation communication **network** and transmitting **sensor** data of a channel to a corresponding server channel in the substation; a wide area communication data access module for matching channels in the substation communication **network** and the **sensor network**, and transmitting data in a certain channel to a corresponding **sensor**; a data interface adaptation protocol module for realizing data protocol adaptation of multiple communication manners between the **sensor network** and the substation communication **network**; and a multi-path data exchange module for realizing data transmission in a lustered multi-path environment and routing management. Through adoption of the **adaptive** substation wireless **sensor network** access communication system, **adaptive** data access of a multiple heterogeneous wireless **sensor network** is realized, and data of various **sensor** networks is transmitted and converged to the substation **network** efficiently and seamlessly.



6. Clustering method and system based on hierarchical region division in wireless sensor network

CN106102075

2016-11-09

GUANGDONG UNIVERSITY OF TECHNOLOGY

78 %

The invention discloses a **clustering** method and a system based on hierarchical region division in a wireless **sensor network**. The method comprises the steps of dividing the hierarchical regions of the monitoring area of a wireless **sensor network**; sequentially determining the optimal cluster number of each hierarchical region with the levels of the hierarchical regions to be from high to low; sequentially determining the cluster domain of each hierarchical region based on the self-**adaptive clustering** method in the roll polling manner with the levels of the hierarchical regions to be from high to low during each roll; visually generating hierarchical non-uniformly distributed clusters through the hierarchically regional division process, and conducting the self-**adaptive clustering** strategy in the non-synchronous mode through the time on each hierarchical region. In this way, the uniform **clustering** in the area is achieved, and the periodic frequent **clustering** is avoided. Meanwhile, the energy consumption in the **clustering** process is reduced, and the energy consumption of each node within each cluster and between clusters can be balanced well. The survival time of the whole **network** is prolonged. The working performance of the whole **network** is improved, and the actual application requirement is met.



7. Two-stage adaptive frequency hopping method for a clustered wireless sensor network

EP2496046

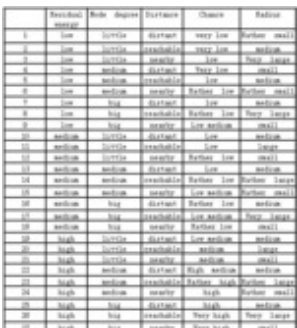
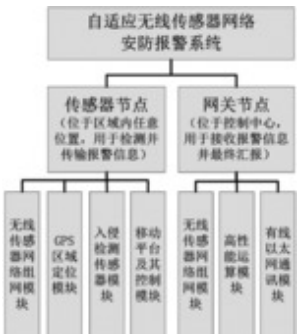
2012-09-05

SHENYANG INSTITUTE OF AUTOMATION CHINESE ACADEMY OF SCIENCES
SHENYANG INSTITUTE OF AUTOMATION

78 %

The present invention relates to a two-stage **adaptive** frequency hopping (AFH) method facing a clustered wireless **sensor network** (WSN). The method includes following steps: establishing a clustered WSN; defining a super frame structure based on IEEE 802.15.4 according to the topology structure of the above clustered WSN; expanding the content of the beacon frame load based on the original beacon frame format of the IEEE 802.15.4 media access control (MAC) layer; according to the above super frame structure and the expanded beacon frame of the IEEE 802.15.4 MAC layer, implementing the process of two-stage AFH for **network** nodes. The use of the clustered WSN in the invention enlarges the **network** scope, reduces the difficulty of maintenance and management, and improves the system flexibility. The design of the two-stage frequency hopping method ensures the compatibility of IEEE 802.15.4 and the reliability of the system. The beacon frame load is based on IEEE 802.15.4, thus during the channel handoff, there is no need to design a special frame for broadcasting channel distribution results. The **network** design is simplified, the number of frame for control is reduced, and the throughput of the **network** is improved.

Frame ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Frame ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

8.	Multi-target direct positioning method based on self-adaptive clustering scheme	CN106792982	2017-05-31	UNIVERSITY OF ELECTRONIC SCIENCE & TECHNOLOGY OF CHINA	78 %	
9.	Annular wireless sensor network non-uniform clustering algorithm based on fuzzy control	CN110536372	2019-12-03	CHANGCHUN UNIVERSITY OF TECHNOLOGY	78 %	
10.	Security protection and alarm method for self-adaptive wireless sensor network	CN105916216	2016-08-31	FUJIAN AGRICULTURE & FORESTRY UNIVERSITY	78 %	
11.	Fuzzy decision-based low-power dissipation self-adaption clustering multihop wireless sensor network topology control method	CN104394566	2015-03-04	NANJING UNIVERSITY OF AERONAUTICS & ASTRONAUTICS (NUAA)	78 %	