GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report

(PSAR)

Date of Submission : 10/10/2019

Dear **Roy Parth Dineshbhai,**

Studied Patent Number for generation of PSAR : **19BE7_160420107046_1**

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Google Patents
Web link of database	:	https://patents.google.com/
2. Keywords Used for Search	:	IOT,Lock,high secure lock
3. Search String Used	:	smart door
4. Number of Results/Hits getting	:	5555

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	
6. Invention is Related to/Class of Invention	:	IOT
6 (a) : IPC class of the studied patent	:	H047 72/04
7. Title of Invention	:	Embedded internet of things (iot) hub for integration with an appliance and associated systems and methods
8. Patent No.	:	
9. Application Number	:	US20170006595A1
9 (a) : Web link of the studied patent	:	https://patents.google.com/patent/US20170006595
10. Date of Filing/Application (DD/MM/YYYY)	:	03/07/2015
11. Priority Date (DD/MM/YYYY)	:	
12. Publication/Journal Number	:	
13. Publication Date (DD/MM/YYYY)	:	
14. First Filled Country : Albania	:	

15. Also Published as

Sr.No	Country Where Filled	Application No./Patent No.
1		

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Omar Zakaria	Santa Clara
2	Joe Britt	CA (US);
3	Houman Forood	Los Altos

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	Kiban Labs Inc	Los Altos, CA (US)

18. Applicant for Patent is : Company

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

The system fails when it looses internet connection.

20. Specific Problem Solved / Objective of Invention

an embedded Internet of Things (IoT) hub comprising a wide area network (WAN) interface to couple the embedded IoT hub to an IoT service over a network, and a local wireless communication interface to communicatively couple the IoT hub to one or more IoT devices;
an IoT hub slot interface coupled to the embedded IoT hub and comprising a first plurality of pins or pads to interface with corresponding pins or pads within an IoT hub slot of an appliance when the embedded IoT hub is inserted into the IoT hub slot; and
a modular antenna interface coupled to the embedded IoT hub and comprising a second plurality of pins or pads to interface with corresponding pins or pads on a modular antenna to be coupled to the embedded IoT hub.

21. Brief about Invention

An embedded Internet of Things (IoT) hub for integration with an appliance and associated systems and methods. For example, one embodiment of an apparatus comprises: an embedded Internet of Things (IoT) hub comprising a wide area network (WAN) interface to couple the embedded IoT hub to an IoT service over a network, and a local wireless communication interface to communicatively couple the IoT hub to one or more IoT devices; an IoT hub slot interface coupled to the embedded IoT hub and comprising a first plurality of pins or pads to interface with corresponding pins or pads within an IoT hub slot of an appliance when the embedded IoT hub is inserted into the IoT hub slot; and a modular antenna interface coupled to the embedded IoT hub and comprising a second plurality of pins or pads to interface with corresponding pins or pads on a modular antenna to be coupled to the embedded IoT hub.

22. Key learning Points

IoT ecosystems are evolving which means there is a need for a flexible IoT implementation for appliances that can be upgraded when needed without changing the underlying appliance.

23. Summary of Invention

This invention relates generally to the field of computer systems. More particularly, the invention relates to an embedded IoT hub for integration with an appliance and associated systems and methods.
Description of the Related Art
The “Internet of Things” refers to the interconnection of uniquely-identifiable embedded devices within the Internet infrastructure. Ultimately, IoT is expected to result in new, wide-ranging types of applications in which virtually any type of physical thing may provide information about itself or its surroundings and/or may be controlled remotely via client devices over the Internet.

24. Number of Claims : 20

25. Patent Status : Published Application

26. How much this invention is related with your IDP/UDP?

Not related to IDP/UDP, It's related to my area of interest

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

NO