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Aim : Study of Rasberry-Pie . beagle board Arduino and other micro-controller (History and elevation

Theory :-

Study of Rasberry - Pie 3

The Rasberry - Pie 3 is a series of small single board computers developed in the United kingdome by the Rasberry pi foundation to promote the teaching of basic computer science in schools and in developing countries. The original model become far more popular than anticipated selling outside of its targets market for uses such as robotics Over 9 million Rasberry Pi s have been sold before febraury 2015

A Rasberry Pi zero with smaller size and reduced input / output & general purpose I/O (GPIO) capabilities, Rasberry-Pi 3 model B was released in Feb 2016 and has on-board WIFI Bluetooth & USB boot capabilities On 28 feb 2017 Rasberry-Pi - zero W was launched with Wifi & Bluetooth Processor speed ranges from 700 MHz to 1.2 GHz for the Pi 3 on board memory ranges from 256 MB to 1GB RAM SD cards are used to store the OS & program memory in

either SDHC or Micro SD cosmic sizes Boards have 4 USB ports video o/p HDMI and composite video are supported with a standard 3.5mm phono jack for audio o/p Lower level o/p is provided by a number of GPIO pins which supports common protocols like I2C. The B model have an 8P8C ethernet port and Pi 3 & Pi zero W have on board WiFi 802.11n and bluetooth.

History And Elevation:

In 2006 early concepts of the Raspberry Pi were based on the Atmel AT mega 644 microcontrolable. Its schematics and PCB layout are publicly available. The computer is inspired by Acorn's BBC Micro of 1981. The Model A, Model B, Model B++ names are referenced to the original models of the British Educational BBC Micro computer developed by Acorn's computers. The first ARM prototype version of the computer was mounted in a package the same size as a USB memory stick. It had a USB Port on one end & an HDMI port on the other end.

The foundation's goal was to offer two versions priced at $25 & $35 on 26 November 2011

Study of Beagle.

The Beagle board is a low-Power open source single-board computer produced by

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Texas Instrument in association with Digi-Key and Network element 14. The Beagle board was also designed with open source s/w development in mind and a way of demonstrating the Texas Instruments OMAP system on a chip. It is also sold to Public under the creative common share alike license. The board was designed using cadence or CAD for schematics & cadence Allergo for PCB manifacturing no simulation s/w was used.

Study of Arduino:

The Arduino project started at the Interaction Design Institute (IDII) in Ivrea Italy. At that time that students used a BASIC stamp microcontroller at a cost of $100 a considerable expense for many students. In 2003 Hernando Barrage created the development platform wiring as a Master's thesis project at IDII. Project goal was to create simple lowcost tools for creating digital project by non-enginnering. The wiring platform consisted of a printed circuitboard (PCB) with an ATmega168 controller on IDE based on Processing and Library functions to easily program the microcontroller the initial Arduino team consisted of Massimo Banzi David Cuartielles Tom Igoe Gianluca Martino and David Mellis but Barragan was not invited to participate following the completion of

the wiring platform lighter and less expensive versions are distributed in the opensource community.

In October 2017 Arduino announced its partnership with ARM holdings (ARM) the announcement said : in part "ARM Recognised independence as a core value of Arduino without any lock-in with the ARM architecture "Arduino intends to continue to work with all technology vendors and architectures.

Conclusion: Thus we have studied history of Rasberry pi Beagle bone and Arduino.