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Figure 2. Different Routing Protocols

There are many ways to classify routing protocols. Figure 2 shows three diffe classifications based on network organisation, route discovery and pretocoveration [20]. With respect to network organisation, four discovery interprete operation protocols: Sensor Protocol for Information via Negeritt & (CPIN) [1], Directed diffusion, Rumor routing and Gradient Based Routing COPA are the examples of flat based routing protocols which assigns equal role to all the nodes. However herarchical based routing protocols assume different roles for different node. This family consists of many protocols some control of a low Freque Adapting Chatering Himson (CPIA) protocols some convict are Low Energy Adaptive Clustering Hierarchy (LEACH), Proor Hering Prove Information Systems (PEGASIS), Threshold-Se sitive Energy Efficient-Sersor Network (TEEN), and Self Organizing Protocol (SOP). Location based routing protocols rely on the location information from nodes to make routing decisions. Some Location based routing protocols are Greedy Perimeter Stateless Routing (GPSR), Geographic Adaptive Fidelity (GAF), Geographic and Energy Aware Routing (GEAR). Some protocols under reactive routing are Ad Hoc On-Demand Distance Vector (AODV) and Dynamic Source Routing (DSR) while Destination-Sequenced Distance Vector (DSDV) and Optimised Link State routing (OLSR) are examples of Proactive Routing. The Hybrid routing protocols exhibit features of both reactive and proactive protocols like Safari. Finally, routing protocols also differ in their operation, for example, negotiation based, multipath based, query based, Quality of Service (QoS) and coherent based protocols [17].

The design of the routing protocol depends on the nature of the application requirements. The routing protocols used earlier were address centred where packets were routed based on unique IP address and the data content remained unchanged during the data delivery process. But this type of addressing scheme is not suitable for WSN, because it is hard to identify the sensor nodes in the network. Since most WSNs are application specific [13] it is relatively advantageous to concentrate on data content rather that address. Data-centric routing is one of them [16]. In data-centric routing scheme, data are retrieved through querying. It is based on certain attribute values like advertisement of data or interest for data which is propagated throughout the network. Moreover, local data are aggregated and it is also possible to add new data at different levels of hop. There are

Priyanka Rathi- is a final year B. Tech student of Computer Science and Engineering Department at Sikkim Manipal Institute and Technology. Her areas of interest are Wireless Sensor Networks and Ad hoc Networks. She can be reached at priyanka.rathi7792@gmail.com.

