## IV. Conclusions

By comparing the first, the second, and the third scenarios, a single coordinator has been used with one, two or four rooms with four sensors in each room. The MAD, DTR (from the MAC layer) and DTR (from sensors) increased as the number of rooms increased. For multiple coordinator systems, the network performance proved to be faster, regardless of the number of sensors.

For both single and multiple coordinator systems, the presence of a router introduced an additional delay of the data traffic; the delay increased as the number of coordinators is increased. Accordingly, it is highly recommended that WSN designers may avoid the use of routers as much as possible from delay point of view.

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