

Cognitive Radio Mesh Network Implemented in GNU Radio

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Abstract—Cognitive Radio Networks (CRNs) seek to use systems of Software Defined Radios (SDRs) to establish networks with flexible and intelligent physical and link layers. GNU Radio is an open source software tool set for working with SDRs and CRNs. Mesh networks are designed to allow for flexible and distributed network architectures to be self forming and to function without the need for centralized infrastructure. Batman-adv is a popular open source layer 2 mesh network protocol. Our work creates a CRN by combining GNU Radio with Batman-adv to create a fully open source cognitive radio mesh network.

Index Terms—Software Defined Radio, ad-hoc network, mesh network, Cognitive Radio Networks, Batman-adv, USRP, GNU Radio

I. INTRODUCTION

This will be followed by the introduction

II. RELATED WORK

The Literature Review will go here

III. DESIGN

Then comes the Design

IV. RESULTS

Now we talk about the data collection

V. LIMITATIONS AND FUTURE WORK

We then talk about the assumptions and such

VI. CONCLUSIONS

Nearly done

VII. ACKNOWLEDGMENTS

We would like to thank the academy