

## **ABSTRACT**

To be maintained continuous communication networks and relationships between both terminals, then it must be on guard constantly reliability engineering specifications required so that the value of the channel can be optimized. Therefore, so that costs can be reduced, it should be a good plan with priorities.

In this case, the authors conducted a study in order to optimize the use of copper wiring that is already in STO Mataram Centrum so efficient and can support broadband channel. Where in this area usage and customer enthusiasm for copper cable network is still quite large. For that is expected in the handling of this improvement can be directly beneficial to prospective customers or existing customers more. The support tools that will be used in this research is Tollgrade, Megger Insulation Tester, Fault Locator, and AVO Meter.

In this final measurement for damage, breakage and analyze the position of the cable network that supports broadband channel. From the results of these measurements have on the analysis of the location of the damage are common in SSK (means of connecting wires) and a major cause of damage due to moisture that causes the cable to enter waters and the meenyebabkan channel interference can not be broadband. Of measurements have been made of copper cable network optimization improvements up to 97% of network cables in the cabinet house RA has supported broadband channels.

**Keywords:** copper wire networks, optimization of repair, broadband