

**DESIGN PROTOTYPE ENGINEERING OF PHYSICAL INTERFACE FROM
WIDEBAND TRANSMISSION EQUIPMENT USING WIRE FIXED PHONE
CUSTOMER**

ABSTRACT

Upcoming to 20 years, wire fixed phone still suitable and have to effort for wide-band telecommunication with Pair Gain technique. Basic specification equipment of telecommunication (Pair Gain) needed to be standart first.

The suitable equipment needs to research is basically from high rate modulation-demodulation using carrier on $100 \text{ kHz} \leq f \leq 1000 \text{ kHz}$ zone. Because impedance characteristic canal on this frequency almost constant $Z_o(f) \approx 125 \pm 10 \% \text{ ohm}$. So the equipment which would be design with this impedance will be very low fault echo probabilities. The equipment would be research have to balun transformation-canal matching $125 \pm 10 \% \text{ ohm}$ to or from definite electronic impedance. Attenuation equalizer T and Faze equalizer T which needed in this zone also be design due to this impedance.

In this final project will be design of physical interface for wide-band transmission using wire fixed phone with full duplex type, in $100 \text{ kHz} \leq f \leq 1000 \text{ kHz}$ frequency zone which can use for many type of signal processing (modulation-demodulation). Component from Indonesia will be on the first primary.

This activities are the intermediate action from theory research before by Soetamso, Drs.