

INVENTION DISCLOSURE

1. **Invention Title.**

Methodology for Localizing Additive Upstream Impairments on CATV Networks

2. **Invention Summary.**

This invention disclosure, defines a methodology to localize additive upstream impairments on CATV networks using granular time and frequency domain analysis of impairments in conjunction with pre-equalization data.

3. **Invention Description.**

a. **Describe the invention in detail and/or attach a description, drawing(s) and/or diagram(s), if available.**

The attached file "DisclosureAdditiveUsImpairmentsFaultLocalization.doc" describes the details of this invention disclosure

b. **Why was the invention developed? What problem(s) does the invention solve? How is it better?**

It provides with the capability to localize additive impairments in the CATV network. This saves time and cost to repair plant problems, improves reliability and enables the provisioning of advanced services.

To the best of my knowledge no process exist to remotely resolve the location of additive impairments like impulses or narrowband interferers. The systems that exist (CPD Hunter) performing similar function require use of instrumentation in the field. The process described in this disclosure requires only instrumentation in the headend or hub in addition to equalization data gathered remotely from CMs in the field.

c. **Briefly outline the potential commercial value and customers of the invention.**

Plant maintenance cost reduction, reduced churn, performance improvement. Customers would be the cable operators as well as operation systems developers and plant maintenance instrumentation vendors.

4. **HOW is your invention different from existing products, processes, systems?**

Not aware of existing products, processes or systems that does what is being described with this invention. As mentioned earlier CPD Hunter from Arcom covers a subset of this functionality but using instrumentation in the field.