ADVANCED SYSTEM UPGRADE REQUIREMENTS AND DESIGN

ABSTRACT ONLY

The demand for increased channel capacity within distribution systems has grown tremendously during the last two to three years. The majority of cable operators, while needing to increase their system capacity, are looking for economical ways to accomplish this task. The immediate answer to this major problem lies in salvaging the cable and amplifier locations while replacing only the active units such as amplifiers. In small channel upgrades such as going from 36 and 54 channels, this task has been fairly simple, but in making larger leaps such as from 36 to 60 and even 77 channels, operators have found that major pitfalls have to be overcome to economically salvage the investment already committed in their systems.

This paper will investigate, from a system level, how operators can optimize their systems to accomplish the larger channel upgrades. Areas that will be looked into are amplifier technologies such as the tradeoffs between push-pull, parallel hybrid, feedforward and quadrapower. Other aspects such as optimization of system tilts and interstage equalization and their effects on system upgrades will be investigated. Also minor consideration will be given to how amplifiers will interface with fiber optic systems.

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