Invention Title:
PNM Grouping Algorithm Based on Tap Subtraction

Invention Summary:
Process two sets of equalization coefficients by subtracting taps. Then restore the main tap in the difference. A decrease in a MTR (main tap ratio, the ratio of energy in the main tap to all other taps combined) relative to the minuend coefficients or the subtrahend coefficients indicates a good match.

Invention Description:
In looking for plant impairments, multiple pairs of DOCSIS upstream equalization coefficients are processed to see if they are correcting for a same impairment. Prior art is to use a frequency domain division method, which is relatively intensive computationally. This subtraction method is much easier and doesn't require Fourier transforms. Tap differences can be zeroed-out to ignore selected taps or group delay.

Invention Commercial Value/Customers:
Useful in PNM, faster.

Invention Differences:
Similar function, similar result, easier and different method.