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Subject: Re: Different ways to model tractive effort  
Posted by [Thomas Nygreen JBD](#) on Tue, 05 Mar 2019 13:20:27 GMT  
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Dear all,

The current railML2 valueTable could support any of the segmented functions listed by Laura and Jörg, if we for each row apply the formula

$F = \text{Sum} ( y_z * v^z )$  for all z

where each value for z is given by columnHeader@zValue.

If no column header is found and only one column is given, we would assume  $z = 0$ , meaning that  $F = y$ . This allows programs to keep listing the tractive effort for small speed steps.

This approach would support any polynomial function, such as constant (only  $z=0$ ), linear (0 and 1), quadratic (0, 1, 2) and cubic (0, 1, 2, 3), the simple hyperbolic (-1, 0) and quadratic hyperbolic (-2) listed by Laura and Jörg, and other simple rational functions where there is no shift of the x variable.

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