
Subject: May I use z parameter for notch as engine tractiveEffort?

Posted by [yutaka.manchu](#) on Thu, 02 Oct 2014 07:40:28 GMT

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Dear All,

Some engines have an acceleration/power control lever with several notches.

Each notch limits the acceleration/power level of the engine.

To express this notion, I'd like to confirm the correctness to use z parameter of valueTable written in
" http://wiki.railml.org/index.php?title=RS:valueTable_tractiveEffort", as
"z" is the additional parameter extending the dependency to $y = f(x, z)$
and "In case of several curves versus the x-coordinate there is the child element <columnHeader>, which takes the values of the z-coordinate as parameter for the array of curves."

According to "<http://wiki.railml.org/index.php?title=RS:columnHeader>", it could be expressed as followings;

```
<vehicle id="ve_6000-Mc1" name="6000-Mc1" length="9.0" speed="60.0"
bruttoWeight="3145.8" bruttoAdhesionWeight="393.2">
```

```
  <engine>
```

```
    <propulsion id="peMotor" powerType="electric" power="1105000"
rotationMassFactor="1.0" description="Motor">
```

```
      <tractiveEffort>
```

```
        <valueTable xValueName="Speed" xValueUnit="km/h"
yValueName="Tractive Effort" yValueUnit="N" zValueName="Notch"
zValueUnit="1">
```

```
          <columnHeader zValue="1">
```

```
            </columnHeader>
```

```
            <valueLine xValue="0.0">
```

```
              <values yValue="5950.1" />
```

```
            </valueLine>
```

```
            <valueLine xValue="36.5">
```

```
              <values yValue="4200.0" />
```

```
            </valueLine>
```

```
            ...
```

```
          <columnHeader zValue="2">
```

```
            </columnHeader>
```

```
            <valueLine xValue="0.0">
```

```
              <values yValue="10016.1" />
```

```
            </valueLine>
```

```
            <valueLine xValue="35.0">
```

```
              <values yValue="8200.0" />
```

```
            </valueLine>
```

...

```
</valueTable>
</tractiveEffort>
</propulsion>
</engine>
</vehicle>
```

May I ask you if my understanding is right?

Best regards,
Utah (Yutaka Manchu)

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----- posted via PHP Headliner -----

Subject: Re: May I use z parameter for notch as engine tractiveEffort?
Posted by [Joerg von Lingen](#) on Thu, 09 Oct 2014 07:00:28 GMT
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Dear Utah,

your assumption is correct. The structure of ValueTable allows to define a 3D matrix of values.
The effort curve is
normally given as effort vs. speed but there might be another parameter like notch position or line
voltage etc to
define a group of curves instead a single one.

Best regards,
Jörg von Lingen

Yutaka Manchu wrote on 02.10.2014 09:40:

- > Dear All,
- >
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- > notches.
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Subject: Re: May I use z parameter for notch as engine tractiveEffort?
Posted by [yutaka.manchu](#) on Mon, 13 Oct 2014 22:23:47 GMT
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Dear Jörg,

Thank you very much to write back to me!

Best regards,
Utah (Yutaka Manchu)

Joerg von Lingen wrote:

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