

Signal Processing Toolbox



dfilt.df2t

Construct a discrete-time, direct form II transposed filter object

Syntax

```
Hd = dfilt.df2t(b,a)
Hd = dfilt.df2t
```

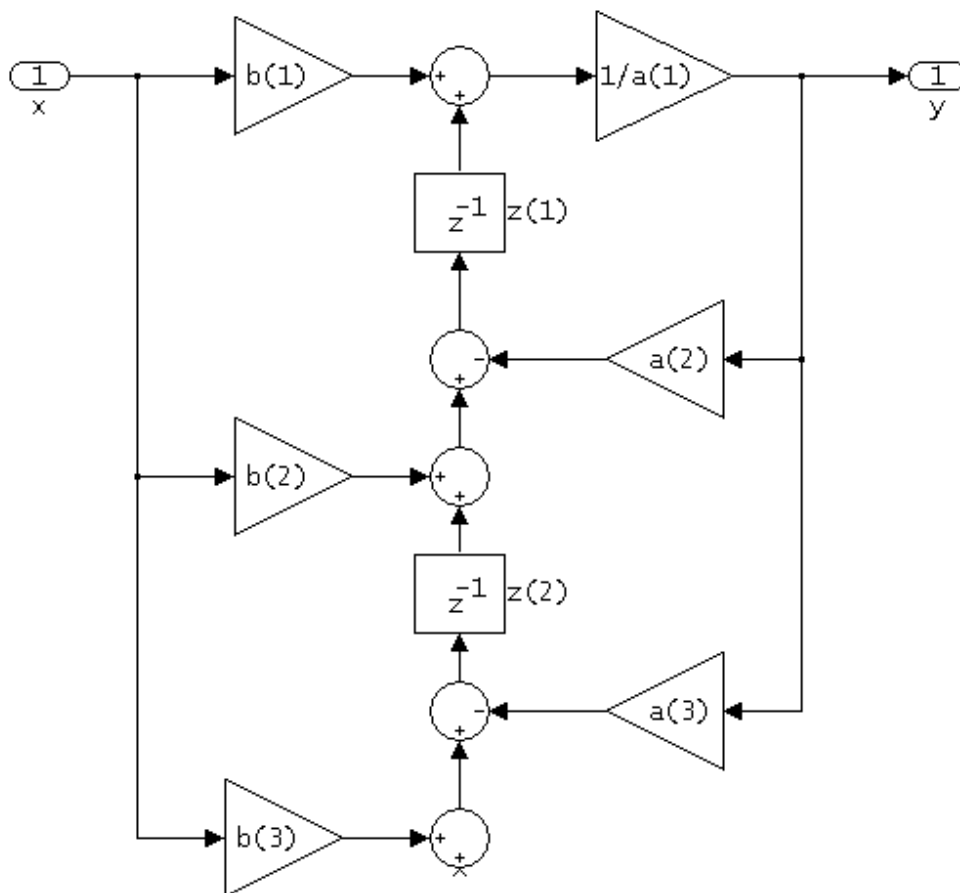
Description

`Hd = dfilt.df2t(b,a)` returns a discrete-time, direct form II transposed filter object, `Hd`, with numerator coefficients `b` and denominator coefficients `a`.

`Hd = dfilt.df2t` returns a default, discrete-time, direct form II transposed filter object, `Hd`, with `b=1` and `a=1`. This filter passes the input through to the output unchanged.

Note If $a(1)$ is not equal to 1, the $1/a(1)$ block is included as shown below. If $a(1)$ is equal to 1, the $1/a(1)$ block is replaced by a direct connection.

df2t
(Transposed Direct Form II)



Examples

Specify a second-order direct form II transposed filter structure for a `dfilt` object, `hd`, with the following code:

```
b = [0.3 0.6 0.3];  
a = [1 0 0.2];  
hd = dfilt.df2t(b,a)  
hd =  
    FilterStructure: 'Direct form II transposed'  
      Numerator: [0.3000 0.6000 0.3000]  
    Denominator: [1 0 0.2000]
```

See Also

[dfilt](#), [dfilt.df1](#), [dfilt.df1t](#), [dfilt.df2](#)



dfilt.df2sos

dfilt.df2tsos

