Subject: Stationarising speech signals
Posted by Mark McGillion on Thu, 08 Apr 1999 07:00:00 GMT
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Hi,

I am working with speech signals (acoustic and impedance signals captured via an Electrolaryngograph) that suffer from drifting DC.

To remove this drift, I am stationarising the signal by forward differencing as follows:

```
FOR i=0,N-2
   x[i]=x[i+1]-x[i] ;x is a vector containing the signal
ENDFOR
```

This works fine for most signals and removes a great deal of the power in the lower frequency ranges, particularly where there is strong drift.

However, where the drift is weak, forward differencing simply kills the fundamental frequency and distorts the harmonics.

A possible solution is to high-pass filter the signal, say from 50Hz to Nyquist (10kHz in this case), removing most of the power in the DC drift.

Does anyone have experience of this and/or any suggestions, e.g. if filtering is the solution, what type/order of filter do you recommend?

Regards,

Mark

please also respond to me at mm@fs1.co.umist.ac.uk.nospam (removing the .nospam at the end).