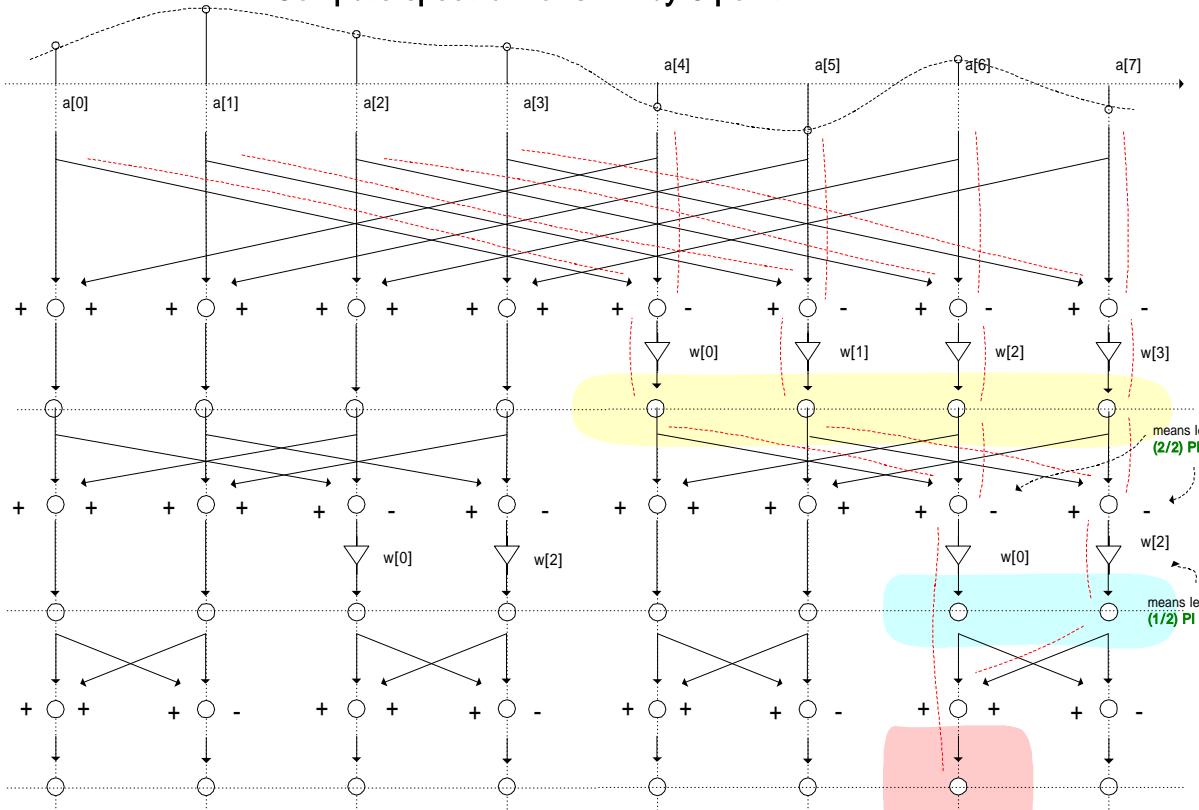
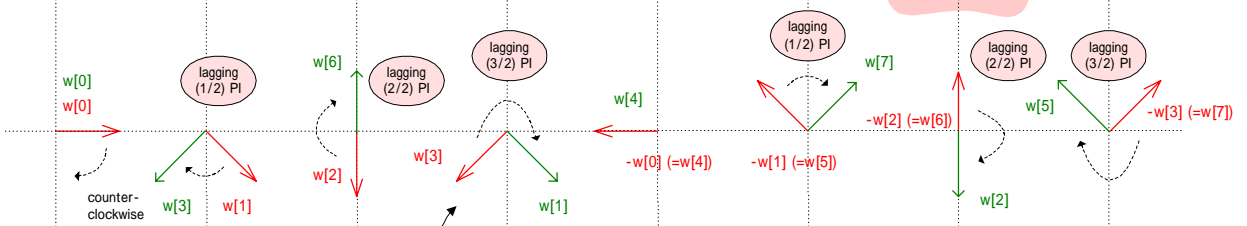


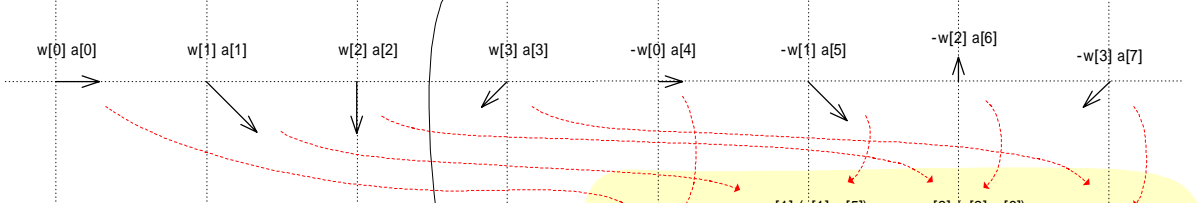
Time-domain data
Sampling Frequency
is 8kHz



Twiddle Factor.
Twiddling Frequency
is 1kHz
(the green is 3kHz)

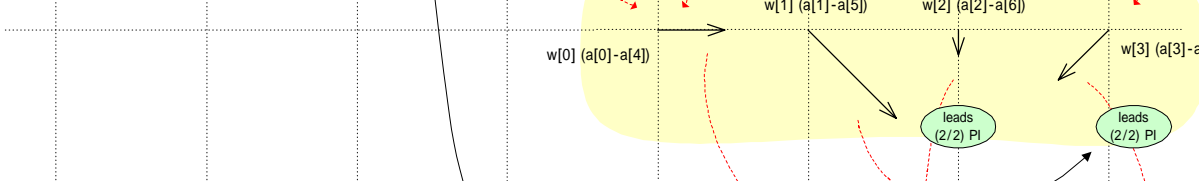


Multiplication of
 $w[n]$ and $a[n]$



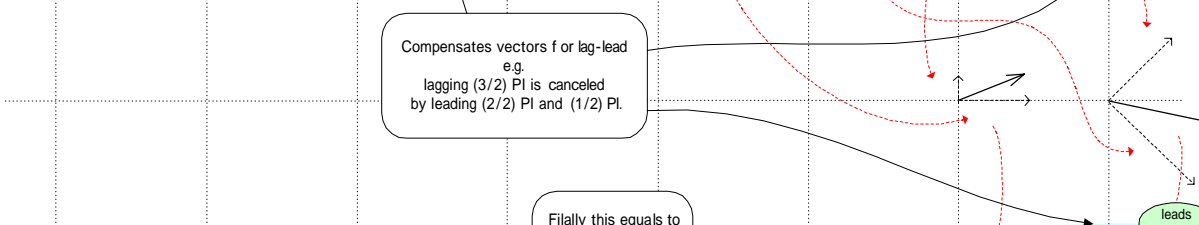
Vector
calculation and
FFT result

Stage 1



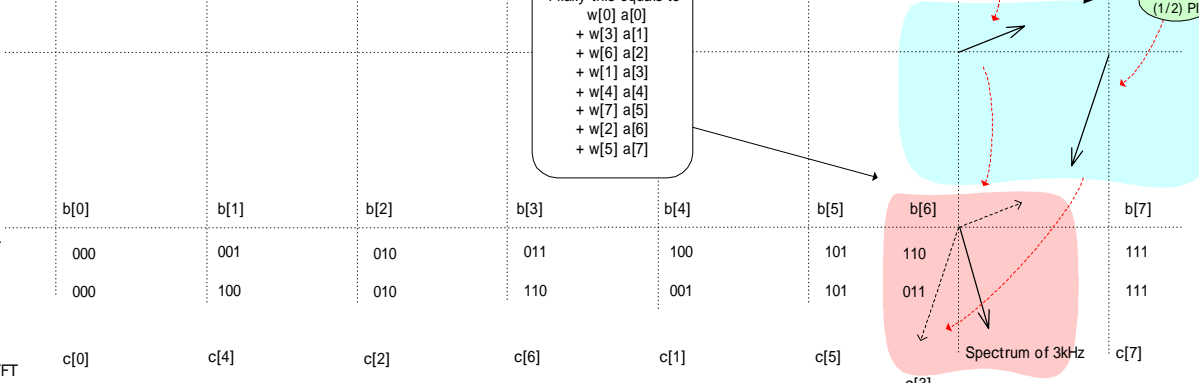
Compensates vectors for lag-lead
e.g.
lagging (3/2) PI is canceled
by leading (2/2) PI and (1/2) PI.

Stage 2



Finally this equals to
 $w[0] a[0]$
 $+ w[3] a[1]$
 $+ w[6] a[2]$
 $+ w[1] a[3]$
 $+ w[4] a[4]$
 $+ w[7] a[5]$
 $+ w[2] a[6]$
 $+ w[5] a[7]$

Stage 3



Actual order of FFT

$b[0]$	$b[1]$	$b[2]$	$b[3]$	$b[4]$	$b[5]$	$b[6]$	$b[7]$
000	001	010	011	100	101	110	111
000	100	010	110	001	101	011	111
$c[0]$	$c[4]$	$c[2]$	$c[6]$	$c[1]$	$c[5]$	$c[3]$	$c[7]$