

# Deblocking filters

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GE imagination at work

# What is proposed

- > Separate the parameters
  - Of the deblocking filter used for temporal prediction
  - Of the deblocking filter used for intra BL
- > Must add some syntax elements
  - In the SPS (or PPS)
  - In the slice header (controlled by the SPS)



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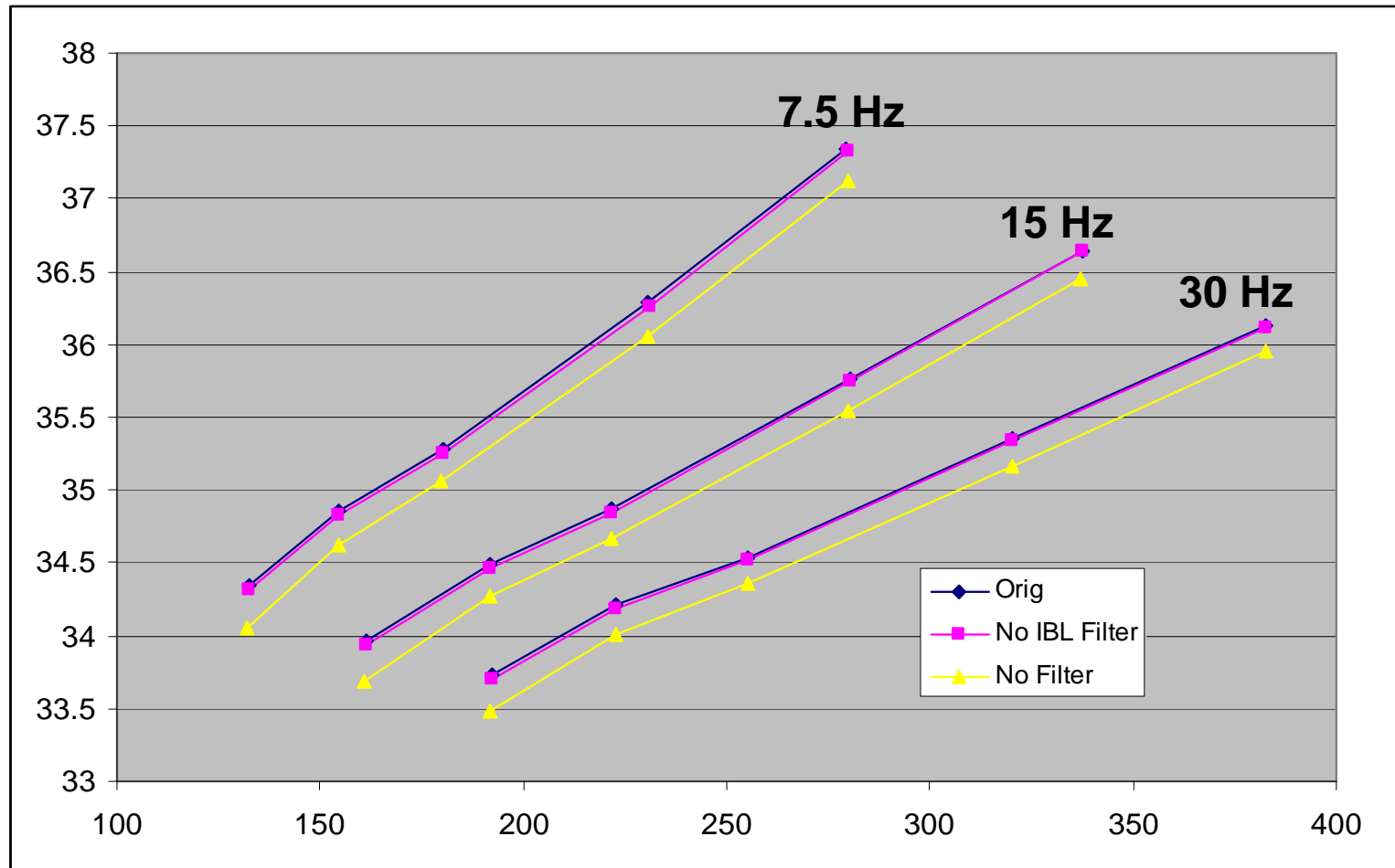
# What is proposed

[...]		
if( deblocking_filter_control_present_flag ) {		
<b>disable_deblocking_filter_idc</b>	2	ue(v)
if( disable_deblocking_filter_idc != 1 ) {		
<b>slice_alpha_c0_offset_div2</b>	2	se(v)
<b>slice_beta_offset_div2</b>	2	se(v)
}		
}		
if(interlayer_deblocking_filter_control_present_flag) {		
<b>disable_interlayer_deblocking_filter_idc</b>	2	ue(v)
if(disable_interlayer_deblocking_filter_idc!= 1 ) {		
<b>interlayer_slice_alpha_c0_offset_div2</b>	2	se(v)
<b>interlayer_slice_beta_offset_div2</b>	2	se(v)
}		
}		



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# PSNR Results (Foreman)

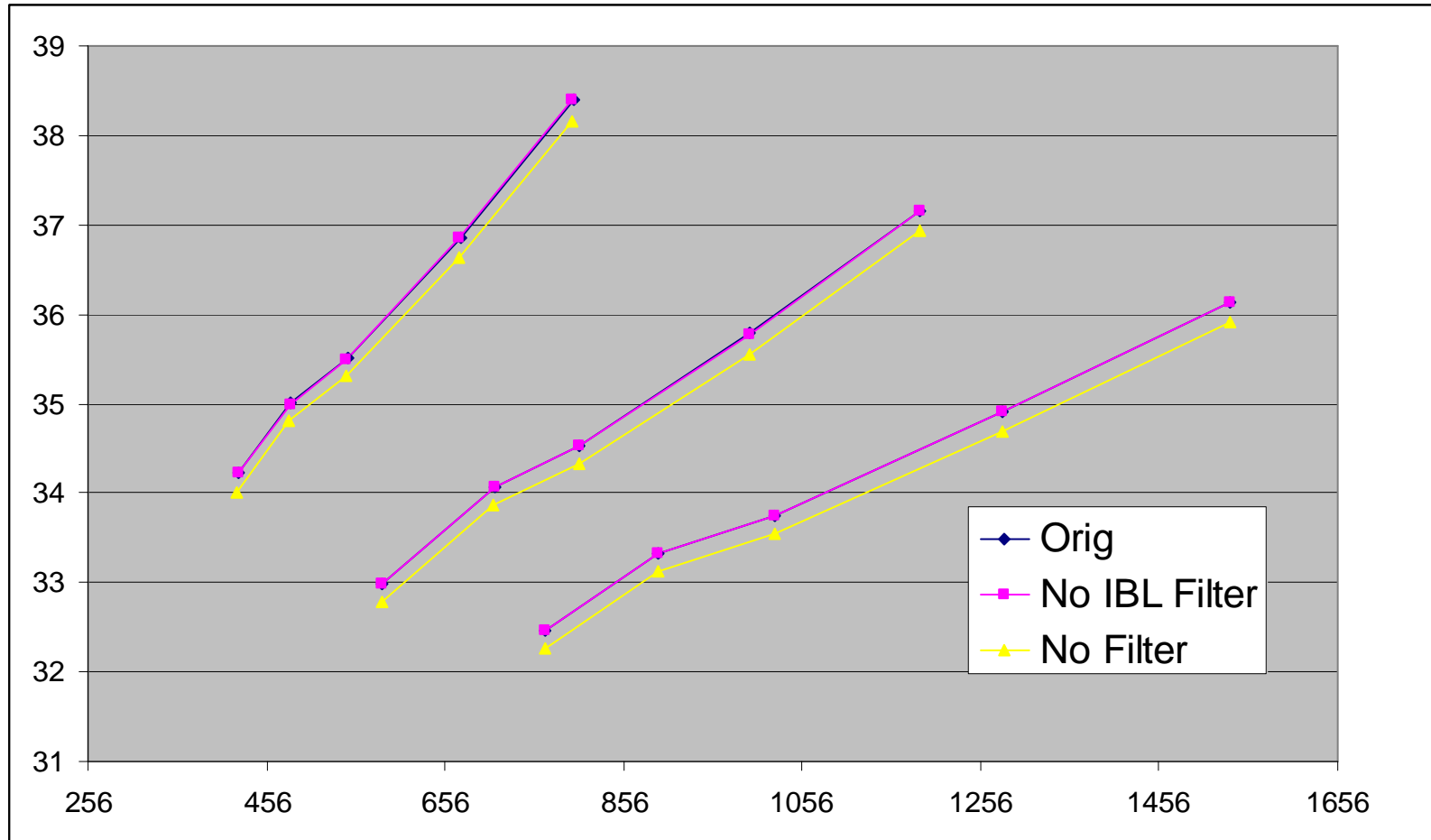


**Mean: -0.018 dB Max diff: -0.029 dB**



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# PSNR Results: Football

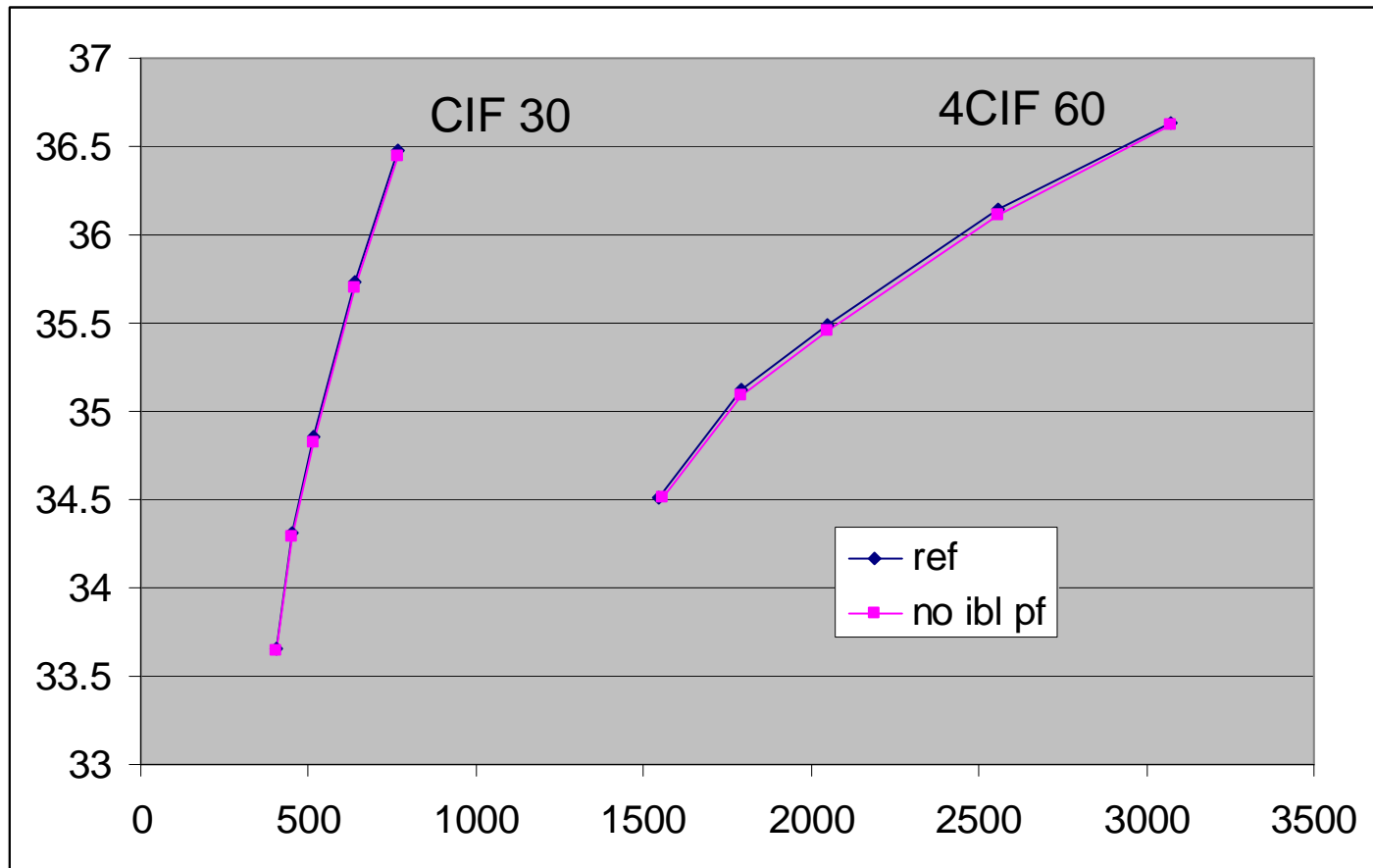


**Mean: -0.0032 dB Max diff: -0.007 dB**



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# PSNR Results: Crew

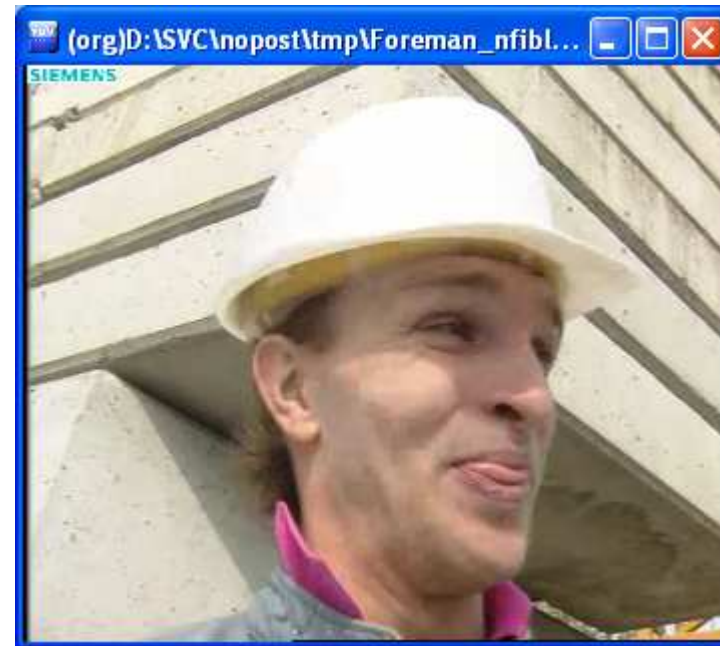


**CIF Mean: -0.024 dB Max diff: -0.027 dB**  
**4CIF Mean: -0.020 dB Max diff: -0.027 dB**



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# BUT...



Forman Picture 8

# And...



Note:  
Worse picture of the sequence



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# Conclusions

- > Be careful with low PSNR !!!!
  - PSNR result nearly identical
  - But some difference in some frames
- > Complexity reduction (estimated)
  - CIF->4CIF, medium quality,
    - entropy decoding not considered
  - Low motion : around 5%
  - High motion: around 10%
- > We still believe controlling the deblocking filter could be useful



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