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**Faroudja et al.**

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(54) **BIDIMENSIONAL BIT-RATE REDUCTION PROCESSING**

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See application file for complete search history.

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Processing System and Method for Support Layer Processing in a Bit  
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(57) **ABSTRACT**

Methods and systems for bidimensional video processing  
comprise preprocessing the video signal in horizontal and  
vertical dimensions of the video signal to reduce an amount of  
information of the video signal by low pass filtering the video  
signal and removing pixels to obtain an information-reduced  
video signal; expanding the information-reduced video signal  
by an expander process to produce an upconverted video  
signal; and comparing the upconverted video signal to the  
original video input to generate a support signal based on a  
difference between the original video signal and the upcon-  
verted video signal. Further embodiments include at least one  
of storing and transmitting the information-reduced video  
signal and the support signal; and during post-processing,  
processing and combining the information-reduced video  
signal and the support signal to generate a full information  
duplicate of the video signal.

**21 Claims, 5 Drawing Sheets**

