

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
28 February 2002 (28.02.2002)

PCT

(10) International Publication Number
WO 02/17486 A1

(51) International Patent Classification⁷: **H03H 17/02**,
17/06

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(21) International Application Number: PCT/SG00/00125

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(22) International Filing Date: 25 August 2000 (25.08.2000)

(81) Designated States (*national*): JP, SG, US.

(25) Filing Language: English

(84) Designated States (*regional*): European patent (AT, BE,
CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,
NL, PT, SE).

(26) Publication Language: English

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Published:

— with international search report

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*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*



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(54) Title: METHOD FOR EFFICIENT AND ZERO LATENCY FILTERING IN A LONG IMPULSE RESPONSE SYSTEM

(57) Abstract: A method for long impulse response digital filtering of an input data stream, by use of a digital filtering system. Where the input data stream is divided into zero-input signals and zero-state signals. One of the zero-input signals and a corresponding impulse response of the digital filtering system is converted to the frequency domain to determine a respective zero-input response of the digital filtering system. One of the zero-state signals is convolved with a corresponding impulse response of the digital filtering system to determine a respective zero-state response of the digital filtering system, wherein at least part of the zero-input signal precedes the zero-state signal. The zero-state response of the digital filtering system is added to the zero-input response of the digital filtering system to determine the response of the digital filtering system. Apparatus for effecting this method is also disclosed.