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Die angehefteten Unterlagen stimmen mit der ursprünglich eingereichten Fassung der auf dem nächsten Blatt bezeichneten europäischen Patentanmeldung überein.	The attached documents are exact copies of the European patent application described on the following page, as originally filed.	Les documents fixés à cette attestation sont conformes à la version initialement déposée de la demande de brevet européen spécifiée à la page suivante.

Patentanmeldung Nr.	Patent application No.	Demande de brevet n°
	00402939.3	

Der Präsident des Europäischen Patentamts;
Im Auftrag

For the President of the European Patent Office

Le Président de l'Office européen des brevets
p.o.

I.L.C. HATTEN-HECKMAN

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Blatt 2 der Bescheinigung
Sheet 2 of the certificate
Page 2 de l'attestation

Anmeldung Nr.: Application no.: Demande n°:	00402939.3	Anmeldetag: Date of filing: 24/10/00 Date de dépôt:

Anmelder:
Applicant(s):
Demandeur(s):

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Bezeichnung der Erfindung:
Title of the invention:
Titre de l'invention:

   Method of transcoding and transcoding device with embedded filters

In Anspruch genommene Prioriät(en) / Priority(ies) claimed / Priorité(s) revendiquée(s)

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Method of transcoding and transcoding device with embedded filters

FIELD OF THE INVENTION

5   The present invention relates to a method of transcoding a primary encoded signal comprising a sequence of pictures, into a secondary encoded signal, said method of transcoding comprising at least a step of decoding a current picture of the primary encoded signal for providing a first transformed signal, an encoding step, following the decoding step, for obtaining the secondary encoded signal, and a step of predicting a transformed motion

10   compensated signal from a transformed encoding error derived from the encoding step, said prediction step being located between the encoding and decoding steps. The invention also relates to a corresponding device for carrying out such a method of transcoding.

This invention is particularly relevant for the transcoding of MPEG encoded video signals.

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BACKGROUND OF THE INVENTION

Bit-rate transcoding is a technique which allows a primary video stream encoded at a bit-rate BR1 to be converted into a secondary video stream encoded at a bit-rate BR2 lower than BR1, the bit-rate reduction being performed in order to meet requirements

20   imposed by the means of transport during broadcasting. A transcoding device as described in the opening paragraph is disclosed in the European Patent Application n° EP 0690 392 (PHF 94001) and is depicted in Fig. 1. Said device (100) for transcoding encoded digital signals (S1) which are representative of a sequence of images, comprises a decoding channel (11,12) followed by an encoding channel (13,14,15). A prediction channel is

25   connected in cascade between these two channels, and said prediction channel comprises, in series, between two subtractors (101,102), an inverse discrete cosine transform sub-assembly IDCT (16), a picture memory MEM (17), a circuit MC (18) for motion compensation in view of displacement vectors (V) which are representative of the motion of each image, and a discrete cosine transform sub-assembly DCT (19).

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SUMMARY OF THE INVENTION

It is an object of the invention to provide a method of transcoding and a corresponding device that allows a better quality of pictures for low bit-rate applications. The present invention takes the following aspect into consideration.

35   With the advent of home digital video recording of MPEG broadcasts, transcoders can be used in consumer devices to implement long play modes or to guarantee the recording time. However, the input signal to be transcoded has often been encoded at a

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