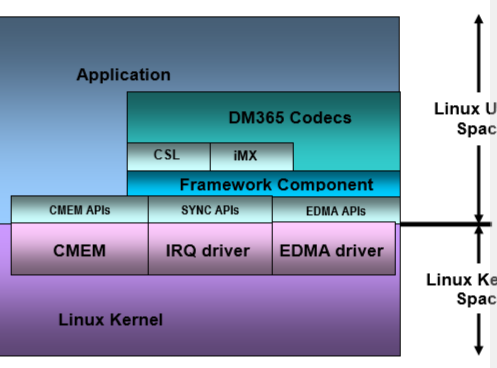
DM365/DM368的H.264基本/主要/高级档次编码器

软件架构

DM365/3M368为应用提供XDM兼容的API，简化了集成和管理。接口细节在本文详述。

DM365/DM368是一个片上数字多媒体系统，主要用于视频监控/视频会议/PMP与其他相关应用。

DM365/DM368 codec是通过构件实现OS与内核的竞争和交互。构件是一个OS与codec之间的软件接口。构件通过预先定义的API与内核交互来管理资源与内存。



概要

H.264(ITU-T，也称为H.264/AVC)是一个流行的视频编码算法，能够在有限带宽上传输高质量多媒体服务。

编码器的输入时YUV序列，可以是色度交错分量的420小端格式。编码器的输出是H.264编码的字节流的bit流。字节流由NAL单元的字节流结构序列组成。每个字节流NAL单元结构包含四字节的开始码前缀0x00000001，后面跟着一个NAL单元结构。编码帧数据由一组sclie组成，每个封装为NAL。Slice由以下组成：

帧内编码数据：空间预测模式与预测误差数据，接下来进行DCT与量化。

帧间编码数据：运动信息与残差数据（两帧之间的差别），接下来进行DCT与量化。

第一个帧称为IDR(即时解码刷新)图像帧。接收端的解码器以模式与预测误差，通过空间帧内预测重构帧。接下来的帧可以是帧内编码或帧间编码。

在帧间编码，在运行信息指定的位置，解码器通过增加残差数据到前一个解码图像来重构bit流。处理过程重复直到整个bit流解码。

在运动估计中，编码器在可用参考帧搜索最佳匹配。在量化后，一些块内容编码为0。H.264编码器跟踪该信息，并且传递该4\*4块编码信息到拟变换，这样就能忽略这些包含全0系数块的计算，不用编码。

H.264编码器定义了环路滤波器来避免块在4\*4块的边界交叉。这是H.264编码过程在运动估计后的第二重要的计算任务。环路滤波器用来在所有的4\*4边界后处理，其操作依赖于特定边界的边界强度。

H.264编码器给予熵编码来使用上下文的自适应，其提升了编码性能。所有属于一个slice的宏块，必须编码在一个光栅扫描顺序。基本档次使用CAVLC。CAVLC是变换与量化系数的阶段，使用切换不同符号上下文自适应表格的熵编码。该语法由H.264编码器保存在4\*4块级别的信息所定义。

**H.264标准术语翻译**

about code mode   intra:帧内编码模式，指利用图像的空间相关性进行编码，通俗点说就是利用同一帧中相邻编码单位（一般是宏块Macroblock，故意下均用宏块替代）来预测欲编码的编码单位  
inter+v:帧间编码模式，指利用图像的时间相关性进行编码，通俗点说就是利用参考帧中位置相同的宏块（或者相邻宏块）来预测欲编码的宏块同帧间编码模式，参考帧中的参考宏块要加一个位移矢量（MV,Motion Vector）  
inter+4v:同上，不过吧一个宏块分成四个块（block），每个块一个位移矢量  
inter+Q:同帧间编码模式，不过量化步长不再是固定值，可以变化  
MVD 差分运动向量  
MV 运动向量  
MB 宏块  
BAB 二进制多边形掩码  
CAE 上下文相关算术编码器  
AAC   高级（改进？）音频编码  
Alpha plane 提供透明信息的图像平面……  
BAP 肢体运动参数  
BDP 肢体定义参数  
BIFS 场景的二值信息格式  
BSAC 基于比特分割的算术编码？？？  
CELP   ？？？  
DAI DMIF应用接口  
DMIF 传输多媒体集成框架  
DNI  DMIF网络接口  
FAP 面部运动参数  
FDP 面部定义参数  
GMC 全局运动补偿  
HVXC 谐波矢量激励编码  
IPMP 知识产权管理和保护  
MPEG-J   MPEG Java 应用程序接口框架  
AAC: Advanced Audio Coding  
CELP: Code Excited Linear Prediction  
OCI      Object Content Information对象内容信息  
OD Object descriptor对象描述符  
PDU Protocol Data Unit协议数据单元  
PSNR Peak Signal to Noise Ratio信噪比  
QCIF Quarter Common Intermediate Format  
QoS Quality of Service  
RTP Real Time Transport Protocol  
RTSP Real Time Streaming Protocol  
RVLC  Reversible Variable Length Coding 反可变长编码  
SA-DCT shape-adaptive DCT形状自适应DCT  
SL Sync(hronization) layer同步层  
VM Verification Model校验模型  
VOP  Video Object Plane 视频对象平面  
XMT Extensible MPEG-4 textual format扩展的MPEG-4 文本格式？？  
BSAC Bit-Sliced Arithmetic Coding？？？？？？？？？？？  
CELP Code Excited Linear Prediction？？？？？？？？？？  
DRC Dynamic Resolution Conversion？？？？？？？？？？？  
FTTC Fiber To The Curb？？？？？？？？？？？？？？？？？  
HILN Harmonic Individual Line and Noise？？？？？？？？  
LTP Long Term Prediction？？？？？？？？？？？？？？？？  
SMIL Synchronized Multimedia Integration Language这个有什么用？  
SNHC Synthetic- Natural Hybrid Coding这个是干什么的？  
BSAC Bit-Sliced Arithmetic Coding位片算术编码  
CELP Code Excited Linear Prediction码本激励线性预测（声码器）  
DRC Dynamic Resolution Conversion动态分辨率转换  
Common Intermidiate Format(CIF) 公用中间格式，介于PAL和NTSC格式之间的一种源视频格式。  
Variable Length Coding(VLC) 可变长编码，统计编码的一种实用编码方法，用于现存的常用标准中。  
Unrestricted Motion Vector mode（UMV） 自由运动矢量模式，H.263中的一种可选模式，允许运动矢量可以指向图象边缘之外。  
Advanced Prediction mode(AP） 高级预测模式，H.263中的一种可选模式，允许每个宏块有三个运动矢量，每个块一个。  
PB－frame PB帧，当前预测帧P与双向预测帧B图象组成一个PB帧，他们是一个编码单元。  
Advanced INTRA Coding Mode(AICM) 先进帧内编码模式。  
Chrominance 色度，任一一种颜色与亮度相同的一个参考色之间的差异。  
Pixel Aspect Ratio 占空比  
Zigzag Positioning Zigzag扫描，在量化之后，对宏块内的系数差进行排序，DC位置第一。  
DCT 离散余弦变换  
Motion Prediction 运动预测  
Motion Compensation 运动补偿  
epzs，其解释是Enhanced Predictive Zonal Search，可以翻译为“改进的预测式区域搜索算法”，主要采用于H.264中，分为3步：  
    1 利用predictive motion vector指定一个目标点  
    2 在该点周围一定区域内采用钻石形状或者方框区域内做普通搜索  
    3 如果有必要，（在采用多预测向量模式下）利用motion vecotr的加权值目标点周围另做搜索以进行比较。  
    以上每一步中都采用门限值进行判断，如果小于某门限，则停止搜索以减小运算量。而这个门限值是adaptive调整的。  
QP: quantiser parameter 量化参数  用于DCT压缩、网络传输和缓存的容量控制

Synthetic指的是合成图像，natural是自然图像。到目前为止，讨论的基本是自然编码，即对象都是由文件输入的。而synthetic图像是人工合成的对象，比如3维字体，3维人物等，以及3Dmax等软件内部的算法。

    synthetic往往与虚拟现实结合紧密，目前国外研究逐渐展开。MPEG-4标准中为了加强交互性，也引入了合成对象编码。

VM翻译成校验模型

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laibar于 2003-11-24 22:59:00 发布  
我和chemm01（以及Liang0726 ）对264文档中的第三章中的名词术语（1－70个）统一了一下，作为下一部翻译的基础。先贴出来，请大家提出不同的意见！（还有想参与翻译文档研读代码的朋友请及时和我联系）  
   
3.1 access unit: A set of NAL units always containing a primary coded picture. In addition to the primary coded picture, an access unit may also contain one or more redundant coded pictures or other NAL units not containing slices or slice data partitions of a coded picture. The decoding of an access unit always results in a decoded picture.   
访问单元：访问单元是NAL单元的集合，其中必定包含一个基本编码图象。除了基本编码图象外，一个访问单元也可能包含一个或者多个冗余编码图象，以及不包含编码图象片数据的NAL单元。解码一个访问单元总是可以得到一幅图像。【译注：访问单元是包含一个可以解码的最小语法单位的数据单元】

3.2 AC transform coefficient: Any transform coefficient for which the frequency index in one or both dimensions is non-zero.   
AC系数：变换系数块中除了左上角第一个系数外的系数

3.3 adaptive binary arithmetic decoding process: An entropy decoding process that recovers the values of bins from a bitstream produced by an adaptive binary arithmetic encoding process.  
 自适应二进制算术解码：对二进制算术编码器产生的位流进行熵解码的过程

3.4 adaptive binary arithmetic encoding process: An entropy encoding process, not normatively specified in this Recommendation | International Standard, that codes a sequence of bins and produces a bitstream that can be decoded using the adaptive binary arithmetic decoding process. 自适应算术编码：是一种熵编码器，在本标准中未做具体规定，该编码器输入二进制数据，输出可以被自适应算术解码器解码的位流

3.5 arbitrary slice order: A decoding order of slices in which the macroblock address of the first macroblock of some slice of a picture may be smaller than the macroblock address of the first macroblock of some other preceding slice of the same coded picture.   
任意片顺序：在片的解码顺序中，图象中的一些片的首宏块的地址可能比同一副图象中的前面的片的首宏块的地址小。

3.6 B slice: A slice that may be decoded using intra prediction from decoded samples within the same slice or inter prediction from previously-decoded reference pictures, using at most two motion vectors and reference indices to predict the sample values of each block.   
B片：一种可以在本片范围内进行内部预测(intra prediction)，还可以利用以前的解 码图像进行帧间预测(inter prediction)，最多使用两个运动矢量和参考帧索引去预测每个块的值

3.7 bin: One bit of a bin string. bin：  
二进制串的一位

3.8 binarization: The set of intermediate binary representations of all possible values of a syntax element. binarization：  
一个语法元素(syntax element)的所有可能取值的二进制表示的集合

3.9 binarization process: A unique mapping process of possible values of a syntax element onto a set of bin strings. binarization process：  
把每个可能出现的语法元素(syntax element)值映射为一个唯一的二进制串

3.10 bin string: A string of bins. A bin string is an intermediate binary representation of values of syntax elements.   
二进制串：一串二进制位。二进制串是语法元素 (syntax element)的取值的二进制表示

3.11 bi-predictive slice: See B slice. bi-predictive slice:   
见B片的说明

3.12 bitstream: A sequence of bits that forms the representation of coded pictures and associated data forming one or more coded video sequences. Bitstream is a collective term used to refer either to a NAL unit stream or a byte stream.   
位流：编码后图像或视频流的位序列。位流可以是NAL流或字节流

3.13 block: An MxN (M-column by N-row) array of samples, or an MxN array of transform coefficients.   
块：一个MxN(列x行)的样本数组，或者是MxN的变换系数(transform coefficients)

3.14 bottom field: One of two fields that comprise a frame. Each row of a bottom field is spatially located immediately below a corresponding row of a top field.   
底场：构成帧的两场中的一场，底场每一行的空间位置都在顶场之下

3.15 bottom macroblock (of a macroblock pair): The macroblock within a macroblock pair that contains the samples in the bottom row of samples for the macroblock pair. For a field macroblock pair, the bottom macroblock represents the samples from the region of the bottom field of the frame that lie within the spatial region of the macroblock pair. For a frame macroblock pair, the bottom macroblock represents the samples of the frame that lie within the bottom half of the spatial region of the macroblock pair.  
底宏块(用于宏块对)：宏块对中包含宏块对底行采样值的宏块。对于场宏块对(field macroblock pair)来说，就是帧中的底场数据。对于帧宏块来说，就是宏块对中位于下面的一半

3.16 broken link: A location in a bitstream at which it is indicated that some subsequent pictures in decoding order may contain serious visual artefacts due to unspecified operations performed in the generation of the bitstream.   
损坏标记：指出位流中可能包含会影响观看的错误

3.17 byte: A sequence of 8 bits, written and read with the most significant bit on the left and the least significant bit on the right. When represented in a sequence of data bits, the most significant bit of a byte is first.   
字节：一个8位的序列，它的读、写都是从左边的最高位开始，到右边的最低位结束。当用 “字节”表示一个数据位的序列时，高位的数据总是最先处理的。

3.18 byte-aligned: A bit in a bitstream is byte-aligned when its position is an integer multiple of 8 bits from the first bit in the bitstream.   
字节对齐：当位流中的一个位的位置是8的整数倍时称其为字节对齐的

3.19 byte stream: An encapsulation of a NAL unit stream containing start code prefixes and NAL units as specified in Annex B.   
字节流： 由一系列的开始码和NAL单元的所组成的字节流

3.20 category: A number associated with each syntax element. The category is used to specify the allocation of syntax elements to NAL units for slice data partitioning. It may also be used in a manner determined by the application to refer to classes of syntax elements in a manner not specified in this Recommendation | International Standard.   
类目：??????

3.21 chroma: An adjective specifying that a sample array or single sample is representing one of the two colour difference signals related to the primary colours. The symbols used for a chroma array or sample are Cb and Cr. NOTE - The term chroma is used rather than the term chrominance in order to avoid the implication of the use of linear light transfer characteristics that is often associated with the term chrominance.   
色差分量：表示样本中的两个色差分量Cr、Cb之一

3.22 coded field: A coded representation of a field.   
已编码的场：代表已经编码的场

3.23 coded frame: A coded representation of a frame. 已编码的帧：代表已经编码的帧 3.24 coded picture: A coded representation of a picture. A coded picture may be either a coded field or a coded frame. Coded picture is a collective term referring to a primary coded picture or a redundant coded picture, but not to both together. 已编码图像：代表已经编码的图像。已编码的图像可以是一个已编码的场或帧。已编码的图像只能是主编码图像或冗余编码图像之一 3.25 coded picture buffer (CPB): A first-in first-out buffer containing access units in decoding order specified in the hypothetical reference decoder in Annex C. 已编码图像缓冲区(CPB)：见附录C包含以解码顺序出现的访问单元的FIFO缓冲区。 3.26 coded representation: A data element as represented in its coded form. 编码表示：数据元素的编码表示 3.27 coded video sequence: A sequence of access units that consists, in decoding order, of an IDR access unit followed zero or more non-IDR access units including all subsequent access units up to but not including any subsequent IDR access unit. (\*)已编码视频序列：由访问单元组成。按照解码顺序，由一个IDR访问单元后接0个或更多个其它非IDR访问单元组成 3.28 component: An array or single sample from one of the three arrays (luma and two chroma) that make up a field or frame. 分量：从组成帧(frame)和场(field)的三个数组(亮度和两个色差)得来的一个数组或样本 3.29 complementary field pair: A collective term for a complementary reference field pair or a complementary non-reference field pair. (\*)互补场对：指互补参考场对或互补非参考场对 3.30 complementary non-reference field pair: Two non-reference fields that are in consecutive access units in decoding order as two coded fields of opposite parity where the first field is not already a paired field. (\*)互补非参考场对：在连续访问单元中的两个已编码非参考场，并作为奇偶性相反的两场，其第一个场没有配对 [align=right][此贴子已经被作者于2003-11-25 22:19:38编辑过][/align]

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3.31 complementary reference field pair: Two reference fields that are in consecutive access units in decoding order as two coded fields and share the same value of frame number, where the second field in decoding order is not an IDR picture and does not include a memory\_management\_control\_operation syntax element equal to 5.  
(\*)互补参考场对：在连续访问单元中的两个已编码参考场，它们共享相同的帧号(frame number)，第二个场不是一个IDR图像，且其不能包含memory\_management\_control\_operation等于5的语法成员

3.32 context variable: A variable specified for the adaptive binary arithmetic decoding process of a bin by an equation containing recently decoded bins.   
上下文变量：二进制算术解码器用的保存前面已经解码的二进制位的变量

3.33 DC transform coefficient: A transform coefficient for which the frequency index is zero in all dimensions.   
直流变换系数：变换系数中频率索引为0的第一个系数

3.34 decoded picture: A decoded picture is derived by decoding a coded picture. A decoded picture is either a decoded frame, or a decoded field. A decoded field is either a decoded top field or a decoded bottom field.   
解码图像：解码图像来自解码一个已经编码的图像，解码图像可以是一个解码的帧或场。一个解码出来的场可以是顶场或底场

3.35 decoded picture buffer (DPB): A buffer holding decoded pictures for reference, output reordering, or output delay specified for the hypothetical reference decoder in Annex C.   
解码图像缓冲区(DPB)：存放已经解码的图像的缓冲区，用于实现图像参考、输出变序或延迟输出。见附录C

3.36 decoder: An embodiment of a decoding process.   
解码器：解码操作的具体实现

3.37 decoding order: The order in which syntax elements are processed by the decoding process. 解码顺序：语法元素被解码处理的次序

3.38 decoding process: The process specified in this Recommendation | International Standard that reads a bitstream and produces decoded pictures.   
解码处理：按照本标准的规定读取位流数据，产生解码图像输出

3.39 direct prediction: An inter prediction for a block for which no motion vector is decoded. Two direct prediction modes are specified that are referred to as spatial direct prediction and temporal prediction mode.   
直接预测：对没有运动矢量的块所使用的帧间预测方法，有两种直接预测模式：时间直接预测和空间直接预测

3.40 decoder under test (DUT): A decoder that is tested for conformance to this Recommendation | International Standard by operating the hypothetical stream scheduler to deliver a conforming bitstream to the decoder and to the hypothetical reference decoder and comparing the values and timing of the output of the two decoders.   
解码测试(DUT)：为了检查与本标准的兼容性，将测试数据送到解码器和假定参考解码器中，比较数值和时间，以测试解码结果的正确性

3.41 emulation prevention byte: A byte equal to 0x03 that may be present within a NAL unit. The presence of emulation prevention bytes ensures that no sequence of consecutive byte-aligned bytes in the NAL unit contains a start code prefix.   
预防歧义字节：在NAL中有可能出现与开始码相同的数据，这时使用0x03这个数据来避免在这种情况下出现歧义

3.42 encoder: An embodiment of an encoding process.   
编码器：编码操作的具体实现

3.43 encoding process: A process, not specified in this Recommendation | International Standard, that produces a bitstream conforming to this Recommendation | International Standard.   
编码处理：按照本标准的规定产生符合本标准的位流，但具体过程本标准并未作规定。

3.44 field: An assembly of alternate rows of a frame. A frame is composed of two fields, a top field and a bottom field.   
场：帧的交替行的集合，一个帧由顶场和底场组成

3.45 field macroblock: A macroblock containing samples from a single field. All macroblocks of a coded field are field macroblocks. When macroblock-adaptive frame/field decoding is in use, some macroblocks of a coded frame may be field macroblocks.   
场宏块：宏块的所有数据都是从一个场中得到的。已编码的场中所有宏块都是场宏块。当使用宏块帧场自适应(MB-AFF)解码时，已编码的帧中也有可能有场宏块

3.46 field macroblock pair: A macroblock pair decoded as two field macroblocks. 场宏块对：按照两个场宏块解码的宏块对

3.47 field scan: A specific sequential ordering of transform coefficients that differs from the zig-zag scan by scanning columns more rapidly than rows. Field scan is used for transform coefficients in field macroblocks.   
场扫描：用于场宏块的系数扫描方式，其不同于Z扫描方式之处在于它更快的扫描行方向的系数

3.48 flag: A variable that can take one of the two possible values 0 and 1.   
标记：一个只有0、1两种取值的变量

3.49 frame: A frame contains an array of luma samples and two corresponding arrays of chroma samples. A frame consists of two fields, a top field and a bottom field.  
 帧：帧包括一个亮度分量和两个色差分量，帧由顶场和底场组成

3.50 frame macroblock: A macroblock representing samples from two fields of a coded frame. When macroblock-adaptive frame/field decoding is not in use, all macroblocks of a coded frame are frame macroblocks. When macroblock-adaptive frame/field decoding is in use, some macroblocks of a coded frame may be frame macroblocks.   
帧宏块：宏块的数据都是由一帧的两场取得。当没有使用宏块帧场自适应(MB-AFF)解码时，帧编码方式编码的帧中所有宏块都是帧宏块。当使用宏块帧场自适应(MB-AFF)解码时，只有部分宏块可能是帧宏块

3.51 frame macroblock pair: A macroblock pair decoded as two frame macroblocks.   
帧宏块对：按照两个帧宏块解码的宏块对

3.52 frequency index: A one-dimensional or two-dimensional index associated with a transform coefficient prior to an inverse transform part of the decoding process.   
频率索引：变换系数的索引值，该索引值被送到反变换部分进行解码处理。

3.53 hypothetical reference decoder (HRD): A hypothetical decoder model that specifies constraints on the variability of conforming NAL unit streams or conforming byte streams that an encoding process may produce.   
假定参考解码器(HRD)：检验编码器产生的符合该标准的NAL单元流或字节流的偏差值。

3.54 hypothetical stream scheduler (HSS): A hypothetical delivery mechanism for the timing and data flow of the input of a bitstream into the hypothetical reference decoder. The HSS is used for checking the conformance of a bitstream or a decoder.   
假定流调度(HSS)：可以按照设定的时间和数据流把比特流传给假定的解码器。HSS用来检查位流或解码器的一致性

3.55 I slice: A slice that is decoded using prediction only from decoded samples within the same slice.   
I片：只参考当前片内已解码的数据进行预测编码的片

3.56 instantaneous decoding refresh (IDR) access unit: An access unit in which the primary coded picture is an IDR picture.   
(\*)立即解码器刷新(IDR)访问单元：主编码图像是IDR图象的访问单元

3.57 instantaneous decoding refresh (IDR) picture: A coded picture containing only slices with I or SI slice types that causes the decoding process to mark all reference pictures as "unused for reference" immediately after decoding the IDR picture. After the decoding of an IDR picture all following coded pictures in decoding order can be decoded without inter prediction from any picture decoded prior to the IDR picture. The first picture of each coded video sequence is an IDR picture.  
(\*)立即解码器刷新(IDR)图像：一个只包含I或SI类型片的图像，。解码完一副IDR图象后，立即将所有的参考图象标识为“尚未用作参考”。IDR图象解码后，解码顺序在其后的编码图象在解码时，帧间预测将不参考该IDR图象前面的任何图象。每个视频序列的第一幅图像一定是IDR图像

3.58 inter coding: Coding of a block, macroblock, slice, or picture that uses inter prediction.  
帧间编码：使用帧间预测的方法编码一个块、宏块、片或图像

3.59 inter prediction: A prediction derived from decoded samples of reference pictures other than the current decoded picture.   
帧间预测：一种参考以前解码的图像来预测当前解码图像的方法

3.60 intra coding: Coding of a block, macroblock, slice, or picture that uses intra prediction.  
帧内编码：使用帧内预测的方法编码一个块、宏块、片或图像

3.61 intra prediction: A prediction derived from the decoded samples of the same decoded slice. 帧内预测：只使用当前解码片做为参考的编码方法

3.62 intra slice: See I slice.   
帧内编码片：见I片

3.63 inverse transform: A part of the decoding process by which a set of transform coefficients are converted into spatial-domain values, or by which a set of transform coefficients are converted into DC transform coefficients.   
反变换： 解码操作的一部分，它将变换系数从频域转换为空域数据，或者转换为直流系数。

3.64 layer: One of a set of syntactical structures in a non-branching hierarchical relationship. Higher layers contain lower layers. The coding layers are the coded video sequence, picture, slice, and macroblock layers.   
层：一种不分支的句法结构，高级的层包含低级层。编码层有编码视频序列、图像、片和宏块层

3.65 level: A defined set of constraints on the values that may be taken by the syntax elements and variables of this Recommendation | International Standard. The same set of levels is defined for all profiles, with most aspects of the definition of each level being in common across different profiles. Individual implementations may, within specified constraints, support a different level for each supported profile. In a different context, level is the value of a transform coefficient prior to scaling.   
(\*)级别：规定可以使用本标准中语法成员和变量的值。所有的profile都定义了相同的level的集合。在不同的上下文中，level还表示扫描之前的变换系数的取值。

3.66 list 0 (list 1) motion vector: A motion vector associated with a reference index pointing into reference picture list 0 (list 1). 运动矢量列表0(1)： 和指向参考图像列表0(1)的参考索引相关联的MV。

3.67 list 0 (list 1) prediction: Inter prediction of the content of a slice using a reference index pointing into reference picture list 0 (list 1).   
预测集0(1)：使用指向参考图象列表的参考索引进行帧间预测

3.68 luma: An adjective specifying that a sample array or single sample is representing the monochrome signal related to the primary colours. The symbol used for luma is Y. NOTE – The term luma is used rather than the term luminance in order to avoid the implication of the use of linear light transfer characteristics that is often associated with the term luminance.   
亮度分量：用来表示视频中亮度信号的数组，使用符号Y表示

3.69 macroblock: A 16x16 block of luma samples and two corresponding blocks of chroma samples. The division of a slice or a macroblock pair into macroblocks is a partitioning.   
宏块：16x16大小的包含一个亮度分量和两个色差分量的块，宏块是片或宏块对的最小分割单位

3.70 macroblock-adaptive frame/field decoding: A decoding process for coded frames in which some macroblocks may be decoded as frame macroblocks and others may be decoded as field macroblocks.   
宏块自适应解码：解码处理一个编码帧时部分宏块可能是按照帧方式解码，部分宏块按照场方式解码的一种解码方式[此贴子已经被作者于2003-11-24 23:03:50编辑过]

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laomao8704于 2003-11-25 15:35:00 发布  
努力，全世界无产者联合起来

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tonylin于 2003-11-25 19:00:00 发布  
Primary的翻译未统一：基本/主?   
3。4：应说明编码“过程”在标准中未作规定。但其结果是规定的。   
3。5：一种片的解码顺序，这时，图象中的某个片的首宏块。。。  
3。6：一种 =〉一种片，其解码   
3.40: DUT: 待测解码器？   
3.53/3.54: 假设（解码器）似应译成假想。   
3.52: 我对MPEG4不了解，但如果直译，应该是：频率索引：在反变换之前变换系数对应的一维或二维索引值。我想它大概对应的是像素索引。或者就将原翻译的后一句话去掉。 3.20 我来试试：. 类目：一个与每个语法元素相关联的数字。在使用片数据划分时，类目指明语法元素是如何分配到NAL单位中。各应用也可以自己决定如何使用这个分类信息。   
3.65 补充一点儿： (\*)级别：对本标准中语法成员和变量的取值范围的一组限定。对所有的profile都定义了相同的level数，因为在不同的Profile中，相同level的定义是相似的。一个具体的实现可以在满足特定的限制下令其支持的不同的Frofile支持不同的level。在不同的上下文中，level还表示扫描之前的变换系数的取值。

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laibar于 2003-11-27 14:29:00 发布  
非常感谢楼上的付出：而且基本上都是正确的。补充如下：   
1  Primary的翻译统一：基本   
2  3.53/3.54:统一翻译为假定的，较好一些。   
3  3.52: 频率索引：在反变换之前变换系数对应的一维或二维索引值。其实和最初的翻译是一样的。但是最初的翻译是意译的，容易理解一些。   
4  20和65基本准确

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kongkong于 2003-11-27 14:40:00 发布  
thx kongkong

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睡猫于 2003-11-27 16:18:00 发布  
bitstream: 译成位流还是码流？ stream呢？：流？码流？就像大家都说“码率”，而少用“位率”。 unit：单元还是单位？ 我们的翻译是否要与钟教授的翻译兼容？（我没仔细读过，不知道它本身是否统一） 3。16：位流 =〉其后的位流中所包含的图像 [译注]意思（从字面上）是说码流是符合语法的，但结果可能是错的。从其使用的词来看，似乎是传输层设置这个标志，标识在此之前曾经与网络断线。 3。17：处理 =〉出现 3。19：（后一个）字节流 =〉流 3。22-27：已编码 =〉编码再缩写中没用“已” 3。25：一个先进先出缓冲区(FIFO)，存放以解码顺序排列的访问单元（还是单位）。解码顺序由假想参考解码器指定（附录C）。 3。27：由访问单元组成。 =〉一串访问单元，。。。，到下一个IDR访问单元为止。 3.30: 连续 =〉相邻两个 =〉两个奇偶性相反的没有 =〉尚未 3。31：共享 =〉有连续 =〉相邻 3。33：频率索引为0的变换系数（[译注]即第一个系数） 3.38: 解码处理/操作/过程？不知是否能统一。 3。43：按照本标准的规定产生符合本标准的位流 =〉产生符合本标准的位流的过程 3。45：也有可能有场宏块 =〉可以含有场宏块 3。47：更快的扫描行 =〉更快地扫描列（译注：即垂直方向更快，Fig 8.8） 3.50；从上下文看，标准的这个地方有笔误，最后一个短语应该是场宏块。然而，并没有错。只是容易误导读者。3。45是精确的。 3。53：一个假想的解码器模型，它对于解码过程所产生的符合本标准的码流的变化范围给出限定。[译注]符合标准的码流必须能被假想解码器处理，不能超出它的处理能力。 3。54：一致性 =〉是否符合标准。 3。70：去掉第一个“解码”。最后一个“方式”=〉过程。 [align=right][此贴子已经被作者于2003-11-27 17:36:41编辑过][/align]

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lijingzhou于 2003-11-27 17:04:00 发布  
3.20 类：一个与每个语法元素相关联的数字。在使用片数据划分时，类指明语法元素应如何分配到NAL单元中。在某种意义上类的使用可能是由软件程序中的语法元素“类”的使用所决定的。（本标准未说明） 呵呵！瞎猜

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xdershao于 2003-11-29 14:35:00 发布  
我的一点意见： bitsream 还是翻译成“码流”更好一些。 3.14 在顶场之下＝>在相应的顶场之下； 3.16 我的翻译：标记码流中一个可能导致在解码过程中包含严重失真的位置， 这个位置的产生是由于在生成码流时不确定的操作。 3.65 扫描前的变换系数值＝>伸缩前的变换系数值。 请各位大侠指教！

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我和chemm01（以及Liang0726 ）对264文档中的第三章中的名词术语（70－140个）统一了一下，作为下一部翻译的基础。先贴出来，请大家提出不同的意见！（还有想参与翻译文档研读代码的朋友请及时和我联系）（本周末开始具体分工，着手翻译文档研读参考代码）

3.70 macroblock address: When macroblock-adaptive frame/field decoding is not in use, a macroblock address is the index of a macroblock in a macroblock raster scan of the picture starting with zero for the top-left macroblock in a picture. When macroblock-adaptive frame/field decoding is in use, the macroblock address of the top macroblock of a macroblock pair is two times the index of the macroblock pair in a macroblock pair raster scan of the picture, and the macroblock address of the bottom macroblock of a macroblock pair is the macroblock address of the corresponding top macroblock plus 1. The macroblock address of the top macroblock of each macroblock pair is an even number and the macroblock address of the bottom macroblock of each macroblock pair is an odd number.   
宏块地址：当没有使用MB自适应解码时，MB地址是一个MB的索引，顺序为MB光栅扫描顺序，从图象的左上角地址为0的MB开始（）。当使用MB自适应解码时，MB对中顶MB的地址为MB对地址值的两倍， 底MB的地址是对应顶MB的地址加1。每一个MB对的顶MB的地址是一个偶数，对应的底MB地址为奇数。

3.71 macroblock location: The two-dimensional coordinates of a macroblock in a picture denoted by ( x, y ). For the top left macroblock of the picture ( x, y ) is equal to ( 0, 0 ). x is incremented by 1 for each macroblock column from left to right. When macroblock-adaptive frame/field decoding is not in use, y is incremented by 1 for each macroblock row from top to bottom. When macroblock-adaptive frame/field decoding is in use, y is incremented by 2 for each macroblock pair row from top to bottom, and is incremented by an additional 1 when a macroblock is a bottom macroblock.

MB定位：图象中的MB的二维坐标以（x，y）表示。左上角的MB坐标定为（0，0）。从左到右x坐标依次加1。当没有使用MB自适应解码时，从上而下y坐标每次加1，使用MB自适应解码时，y坐标每次加2，如果MB是一个底MB，则再加1。

3.72 macroblock pair: A pair of vertically contiguous macroblocks in a frame that is coupled for use in macroblock-adaptive frame/field decoding processing. The division of a slice into macroblock pairs is a partitioning.  
MB对：在一帧中垂直方向连续的一对MB，在自适应MB解码中一起使用。将一个slice分割为MB对称为分割。（？？？）

3.73 macroblock partition: A block of luma samples and two corresponding blocks of chroma samples resulting from a partitioning of a macroblock for inter prediction.   
MB分割：帧间预测（帧内预测时不一样吗？？）时将一个MB分割为一个亮度块和对应的两个色度块。（这个待查证）

3.74 macroblock to slice group map: A means of mapping macroblocks of a picture into slice groups. The macroblock to slice group map consists of a list of numbers, one for each coded macroblock, specifying the slice group to which each coded macroblock belongs.   
MB到slice组的映射：一种映射图象的MB到slice组的方式。该映射由数值列表组成，每个编码的MB有一个数值，该数值指定每个编码的MB属于哪一个slice组。

3.75 map unit to slice group map: A means of mapping slice group map units of a picture into slice groups. The map unit to slice group map consists of a list of numbers, one for each slice group map unit, specifying the slice group to which each coded slice group map unit belongs.   
映射单元到slice组的映射：一种映射图象的slice组映射单元到slice组的方式。该映射单元到slice组的映射由一个数值列表组成，每一个slice组映射单元有一个数值，该数值指定了每一个编码的slice组映射单元属于哪一个slice组。

3.76 memory management control operation: Seven operations that control reference picture marking.   
内存管理控制操作：控制参考图象标记的操作。

3.77 motion vector: A two-dimensional vector used for inter prediction that provides an offset from the coordinates in the decoded picture to the coordinates in a reference picture.   
运动矢量：一个二维矢量，用在帧间预测中，提供解码图象(中块)相对于参考图象(中参考块)的坐标的偏移量。

3.78 NAL unit: A syntax structure containing an indication of the type of data to follow and bytes containing that data in the form of an RBSP interspersed as necessary with emulation prevention bytes.   
NAL单元：是一种语法结构，该结构包含了指示后面所跟数据类型的标示及包含RBSP形式的数据。

3.79 NAL unit stream: A sequence of NAL units.   
NAL单元流：NAL单元组成的序列。

3.80 non-paired reference field: A decoded reference field that is not part of a complementary reference field pair.   
不成对的参考场：已解码的参考场，不是互补的参考场对。

3.81 non-reference picture: A picture coded with nal\_ref\_idc equal to 0. A non-reference picture is not used for inter prediction of any other pictures.   
非参考图象：编码的nal\_ref\_idc＝0的图象。该类型的图象不能用在其它图象的帧间预测中。

3.82 opposite parity: The opposite parity of top is bottom, and vice versa.   
相反性：top的反是bottom，反之亦然。

3.83 output order: The order in which the decoded pictures are output from the decoded picture buffer.   
输出顺序：解码图象从解码图象缓冲中输出的顺序。

3.84 P slice: A slice that may be decoded using intra prediction from decoded samples within the same slice or inter prediction from previously-decoded reference pictures, using at most one motion vector and reference index to predict the sample values of each block. P slice：  
该类型的slice可以使用同一个slice中已经解码的取样值进行帧内预测，或者使用先前解码的参考图象进行帧间预测。并且最多使用一个MV和参考索引来预测每个块的值。

3.85 parameter: A syntax element of a sequence parameter set or a picture parameter set. Parameter is also used as part of the defined term quantisation parameter.   
参数：一个序列参数集或者图象参数集的语法元素。参数也被用作术语量化参数的一部分。

3.86 parity: The parity of a field can be top or bottom.   
奇偶性：一个场的奇偶性可能是top或者bottom。

3.87 partitioning: The division of a set into subsets such that each element of the set is in exactly one of the subsets.   
分割：一个集合分割为子集，集合中的每一个元素都唯一的存在于某一个子集中。

3.88 picture: A collective term for a field or a frame. 图象：一帧或一场。 3.89 picture order count: A variable having a value that increases with increasing picture position in output order relative to the previous IDR picture in decoding order or relative to the previous picture containing the memory management control operation that marks all reference pictures as “unused for reference”.   
图象顺序值：

3.90 prediction: An embodiment of the prediction process.   
预测：预测处理的具体过程

3.91 prediction process: The use of a predictor to provide an estimate of the sample value or data element currently being decoded.   
预测处理：使用预测器估计出当前正被解码的样本值或数据成员

3.92 predictive slice: See P slice.

3.93 predictor: A combination of previously decoded sample values or data elements used in the decoding process of subsequent sample values or data elements.   
预测器：指先前已解码的样本值或者数据成员，解码后续的样本值或数据成员时会使用到它们。

3.94 primary coded picture: The coded representation of a picture to be used by the decoding process for a bitstream conforming to this Recommendation | International Standard. The primary coded picture contains all macroblocks of the picture. The only pictures that have a normative effect on the decoding process are primary coded pictures. See also redundant coded picture.   
基本编码图象：在解码过程中会被使用。基本编码图象包含图象中的所有MB。只有这种图象对解码处理有影响。

3.95 profile: A specified subset of the syntax of this Recommendation | International Standard. Profile：  
本标准的语法子集。

3.96 quantisation parameter: A variable used by the decoding process for scaling of transform coefficient levels.  
量化参数：解码处理中使用的一个值，用于缩放变换系数。

3.97 random access: The act of starting the decoding process for a bitstream at a point other than the beginning of the stream.   
随机访问：从非起点的地方开始解码。

3.98 raster scan: A mapping of a rectangular two-dimensional pattern to a one-dimensional pattern such that the first entries in the one-dimensional pattern are from the first top row of the two-dimensional pattern scanned from left to right, followed similarly by the second, third, etc. rows of the pattern (going down) each scanned from left to right.   
光栅扫描：将二维矩形映射到一维。一维的开始为二维的顶行，按照自左至右的方式依次扫描，第2、3…..行，每一行扫描都是从左到右。

3.99 raw byte sequence payload (RBSP): A syntax structure containing an integer number of bytes that is encapsulated in a NAL unit. An RBSP is either empty or has the form of a string of data bits containing syntax elements followed by an RBSP stop bit and followed by zero or more subsequent bits equal to 0. RBSP：  
原始字节序列载荷:在NAL单元中封装的包含了整数个字节的语法结构。要么为空，要么是包含语法元素的串式位流，后跟一个表示RBSP结束的停止位，紧接着一些为0的填充位。

3.100 raw byte sequence payload (RBSP) stop bit: A bit equal to 1 present within a raw byte sequence payload (RBSP) after a string of data bits. The location of the end of the string of data bits within an RBSP can be identified by searching from the end of the RBSP for the RBSP stop bit, which is the last non-zero bit in the RBSP. RBSP

结束比特：在RBSP中跟在数据位流后的一个值为1的位。在RBSP中可以通过搜索停止位来标定一个RBSP的结束位置，结束位是RBSP中最后一个非零位。

3.101 recovery point: A point in the bitstream at which the recovery of an exact or an approximate representation of the decoded pictures represented by the bitstream is achieved after a random access or broken link.   
恢复点：是位流中的一个点，在该点处可以实现解码图象重新精确或近似的同步。

3.102 redundant coded picture: A coded representation of a picture or a part of a picture. The content of a redundant coded picture shall not be used by the decoding process for a bitstream conforming to this Recommendation | International Standard. A redundant coded picture is not required to contain all macroblocks in the primary coded picture. Redundant coded pictures have no normative effect on the decoding process. See also primary coded picture.   
冗余编码图象：图象或者部分图象的编码表示。该类型的图象内容在解码时不应被使用。冗余编码图象不必包含基本编码图象的所有MB。对于解码处理没有影响。

3.103 reference field: A reference field may be used for inter prediction when P, SP, and B slices of a coded field or field macroblocks of a coded frame are decoded. See also reference picture.   
参考场：参考场可以被场编码的图像中P、SP、B类型slice或者帧编码的图像中场宏块使用。

3.104 reference frame: A reference frame may be used for inter prediction when P, SP, and B slices of a coded frame are decoded. See also reference picture.   
参考帧：参考帧可以被P、SP、B类型的slice在帧间预测解码时使用。

3.105 reference index: An index into a reference picture list.   
参考索引：参考图象列表的索引值。

3.106 reference picture: A picture with nal\_ref\_idc not equal to 0. A reference picture contains samples that may be used for inter prediction in the decoding process of subsequent pictures in decoding order.   
参考图象： nal\_ref\_idc的值不为0的图象。参考图象包含了后续图象进行帧间预测解码时所需要用到的样本值。

3.107 reference picture list: A list of short-term picture numbers and long-term picture numbers that are assigned to reference pictures.   
参考图象列表：给参考图像分配一个长时或短时图像编号的列表。（？？？）

3.108 reference picture list 0: A reference picture list used for inter prediction of a P, B, or SP slice. All inter prediction used for P and SP slices uses reference picture list 0. Reference picture list 0 is one of two reference picture lists used for inter prediction for a B slice, with the other being reference picture list 1.   
参考图象列表0：P、B、SP类型的slice在帧间预测时所使用的参考图象列表。所有的P、SP类型的slice使用帧间预测时都使用参考列表0。B类型的slice帧间预测时使用两种列表，其中之一就是列表0，另一个是列表1。（？？？）

3.109 reference picture list 1: A reference picture list used for inter prediction of a B slice. Reference picture list 1 is one of two lists of reference picture lists used for inter prediction for a B slice, with the other being reference picture list 0.   
参考图象列表1：B类型的slice在帧间预测时所使用的参考图象列表（还是用参考列表0）（？？？）。

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laibar于 2003-11-25 22:09:00 发布

3.110 reference picture marking: Specifies, in the bitstream, how the decoded pictures are marked for inter prediction.   
参考图象标识：出现在位流中，。指示用于帧间预测的解码图象

3.111 reserved: The term “reserved”, when used in the clauses specifying some values of a particular syntax element, means that these values shall not be used in bitstreams conforming to this Recommendation | International Standard, but may be used in future extensions of this Recommendation | International Standard by ITU?T | ISO/IEC.   
保留：该术语用在特定语法元素的特定取值中，意味着这些取值不能被用在本标准中，但是可能用于以后的扩展中。

3.112 residual: The decoded difference between a prediction of a sample or data element and its decoded value.   
残差：样本值或数据成员的预测值与解码值间的差值。

3.113 run: A number of consecutive data elements represented in the decoding process. In one context, the number of zero-valued transform coefficient levels preceding a non-zero transform coefficient level in the list of transform coefficient levels generated by a zig-zag scan or a field scan. In other contexts, run refers to a number of macroblocks.   
行程：在解码过程中连续数据元素出现的个数。一种情况下，行程指示经过Z扫描或场扫描后非零系数前0的个数。在其他情况下，行程指的是MB个数。

3.114 sample aspect ratio: Specifies, for assisting the display process, which is not specified in this Recommendation | International Standard, the ratio between the intended horizontal distance between the columns and the intended vertical distance between the rows of the luma sample array in a frame. Sample aspect ratio is expressed as h:v, where h is horizontal width and v is vertical height (in arbitrary units of spatial distance).   
采样宽高比：规定帧中亮度取样宽度和高度的比值，用于显示处理。本标准中未作规定。

3.115 scaling: The process of multiplying transform coefficient levels by a factor, resulting in transform coefficients.   
缩放：变换系数的非0值乘上一个因子产生最终变换系数。

3.116 SI slice: A slice that is coded using prediction only from decoded samples within the same slice and using quantisation of the prediction samples. An SI slice can be coded such that its decoded samples can be constructed identically to an SP slice. SI slice：   
该类型的slice在预测时仅使用在同一个slice中的解码的样值，并使用预测样值的量化值。一个SI类型的slice的解码的取样值可以。。。？？？。(待讨论)

3.117 skipped macroblock: A macroblock for which no data is coded other than an indication that the macroblock is to be decoded as "skipped". This indication may be common to several macroblocks.   
跳过的MB：该类MB没有数据被编码，只有一个标识，说明该MB将被编码为跳过MB。该标识可以被几个MB共用。

3.118 slice: An integer number of macroblocks or macroblock pairs ordered consecutively in the raster scan within a particular slice group. For the primary coded picture, the division of each slice group into slices is a partitioning. Although a slice contains macroblocks or macroblock pairs that are consecutive in the raster scan within a slice group, these macroblocks or macroblock pairs are not necessarily consecutive in the raster scan within the picture. The addresses of the macroblocks are derived from the address of the first macroblock in a slice (as represented in the slice header) and the macroblock to slice group map.   
Slice：slice组中以光栅扫描顺序相邻的整数个MB或者MB对。注：一个slice中的MB或者MB对在一副图象内不一定是连续的。MB的地址可以根据slice中的第一个MB的地址（在slice头中）和MB到slice组的映射来获得。(待讨论)

3.119 slice data partitioning: A method of partitioning selected syntax elements into syntax structures based on a category associated with each syntax element.   
Slice数据分割：分割选定的语法元素到语法结构的方法，分割时基于一个和每一个语法元素相联系的目录。(待讨论)

3.120 slice group: A subset of the macroblocks or macroblock pairs of a picture. The division of the picture into slice groups is a partitioning of the picture. The partitioning is specified by the macroblock to slice group map.   
Slice组：图象中的MB或者MB对的子集。分割图象为slice组称为图象的分割。分割由MB到slice组的映射来指定。（注：所以MB到slice组的映射既可以将图象分割为slice组，）

3.121 slice group map units: The units of the map unit to slice group map. Slice  
组映射单元：参考“75”。

3.122 slice header: A part of a coded slice containing the data elements pertaining to the first or all macroblocks represented in the slice.   
Slice头：编码的slice的一部分，包含了与该slice中第一个或者所有MB有关的数据成员。

3.123 source: Term used to describe the video material or some of its attributes before encoding. 源：用来描述视频素材或其编码前属性的术语。

3.124 SP slice: A slice that is coded using inter prediction from previously-decoded reference pictures, using at most one motion vector and reference index to predict the sample values of each block. An SP slice can be coded such that its decoded samples can be constructed identically to another SP slice or an SI slice.  
SP slice：该类型的slice在编码时使用先前解码的参考图象进行帧间预测，最多使用一个MV和参考索引来预测每一个块的取样值。一个SP类型的slice被编码时，他的解码的取样值可以。。。？？？。。。(待讨论)

3.125 start code prefix: A unique sequence of three bytes equal to 0x000001 embedded in the byte stream as a prefix to each NAL unit. The location of a start code prefix can be used by a decoder to identify the beginning of a new NAL unit and the end of a previous NAL unit. Emulation of start code prefixes is prevented within NAL units by the inclusion of emulation prevention bytes. 开始码前缀：一个等于0x000001的三个字节的唯一的序列，嵌入到字节流中作为每一个NAL单元的前缀。解码器可以使用开始码前缀的位置来识别一个新的NAL单元的开始和前一个NAL单元的结束。通过包含一个预防二义字节使得在NAL单元中不会使得开始码前缀发生歧义。

3.126 string of data bits (SODB): A sequence of some number of bits representing syntax elements present within a raw byte sequence payload prior to the raw byte sequence payload stop bit. Within an SODB, the left-most bit is considered to be the first and most significant bit, and the right-most bit is considered to be the last and least significant bit.   
数据位组成的字符串SODB：表示在RBSP结束位前的表示语法成员的一些位。在一个SODB中，最左边的位被认为是最高有效位(MSB)，最右边的比特被认为是最低有效位(LSB)。

3.127 sub-macroblock: One quarter of the samples of a macroblock, i.e., an 8x8 luma block and two 4x4 chroma blocks of which one corner is located at a corner of the macroblock. 子MB：一个MB样本的四分之一，也就是说，一个8×8亮度块和两个4×4的色差块。

3.128 sub-macroblock partition: A block of luma samples and two corresponding blocks of chroma samples resulting from a partitioning of a sub-macroblock for inter prediction.   
子MB分割：帧间预测时使用的从子MB分离出来的一个亮度和两个色差块 (待讨论)。

3.129 switching I slice: See SI slice. 3.130 switching P slice: See SP slice.

3.131 syntax element: An element of data represented in the bitstream.   
语法成员：数据成员在位流中的表示

3.132 syntax structure: Zero or more syntax elements present together in the bitstream in a specified order. 语法结构：位流中按特定顺序出现的语法成员。

3.133 top field: One of two fields that comprise a frame. Each row of a top field is spatially located immediately above the corresponding row of the bottom field.   
顶场：组成一帧的一个场。顶场的每一行空间上位于对应底场所在行之上。

3.134 top macroblock (of a macroblock pair): The macroblock within a macroblock pair that contains the samples in the top row of samples for the macroblock pair. For a field macroblock pair, the top macroblock represents the samples from the region of the top field of the frame that lie within the spatial region of the macroblock pair. For a frame macroblock pair, the top macroblock represents the samples of the frame that lie within the top half of the spatial region of the macroblock pair.   
顶MB：宏块对中的宏块，包含宏块对的顶行的取样值。对于一个场宏块对，顶MB表示帧的顶场的取样值。对于帧宏块对，顶MB表示宏块对的上半区域的帧的取样值。

3.135 transform coefficient: A scalar quantity, considered to be in a frequency domain, that is associated with a particular one-dimensional or two-dimensional frequency index in an inverse transform part of the decoding process.   
变换系数：频域内经过变换和缩放（量化）后的值。每个值都和一个频率索引相对应

3.136 transform coefficient level: An integer quantity representing the value associated with a particular two-dimensional frequency index in the decoding process prior to scaling for computation of a transform coefficient value.   
非零变换系数：一个非零整数，在求变换系数的时候缩放处理前的值

3.137 universal unique identifier (UUID): An identifier that is unique with respect to the space of all universal unique identifiers. UUID通用的唯一标识符：一个唯一的标识符。

3.138 variable length coding (VLC): A reversible procedure for entropy coding that assigns shorter bit strings to symbols expected to be more frequent and longer bit strings to symbols expected to be less frequent.   
可变长编码VLC：一种可逆熵编码，为出现频率高的符号分配少的位，为出现频率低的符号更多的位。

3.139 zig-zag scan: A specific sequential ordering of transform coefficient levels from (approximately) the lowest spatial frequency to the highest. Zig-zag scan is used for transform coefficient levels in frame macroblocks. Z扫描：一种特殊的变换系数扫描顺序，从最低频率直到最高频率。Z扫描用于扫描帧MB的变换系数。

1 Abbreviations   
4.1 CABAC: Context-based Adaptive Binary Arithmetic Coding基于上下文的自适应算术编码 4.2 CAVLC: Context-based Adaptive Variable Length Coding基于上下文的可变长编码   
4.3 CBR: Constant Bit Rate固定位率   
4.4 CPB: Coded Picture Buffer编码图象缓冲   
4.5 DPB: Decoded Picture Buffer解码图象缓冲   
4.6 DUT: Decoder under test   
4.7 FIFO: First-In, First-Out先入先出队列   
4.8 HRD: Hypothetical Reference Decoder   
4.9 HSS: Hypothetical Stream Scheduler   
4.10 IDR: Instantaneous Decoding Refresh  瞬时解码恢复  
4.11 LSB: Least Significant Bit最低位   
4.12 MB: Macroblock宏块   
4.13 MBAFF: Macroblock-Adaptive Frame-Field Coding宏块自适应帧/场编码   
4.14 MSB: Most Significant Bit最高位   
4.15 NAL: Network Abstraction Layer网络抽象层   
4.16 RBSP: Raw Byte Sequence Payload   
4.17 SEI: Supplemental Enhancement Information附加增强信息   
4.18 SODB: String Of Data Bits数据位组成的字符串   
4.19 UUID: Universal Unique Identifier   
4.20 VBR: Variable Bit Rate可变比特率   
4.21 VCL: Video Coding Layer视频编码层   
4.22 VLC: Variable Length Coding可变长编码   
4.23 VUI: Video Usability Information

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3.70：宏块级自适应解码 =〉宏块级场帧自适应解码   
3.72：连续 =〉相邻将一个slice分割为MB对称为分割 =〉将一个slice分割为MB对是（数学意义上的）分割。 [译注]参考分割。 是否要统一使用MB或宏块？ slice的翻译是否统一为片或条或块条或不翻译？它给我的感觉是一长条宏块。   
3.76：操作 =〉七个操作   
3.78：补上原文中的：（其中可能含有必要的防止歧义字节）   
3.79：不是 =〉但不属于一个   
3.81：不能 =〉没有 3.86：可能 =〉可以   
3.87：请讨论：译成分割、划分或分区，这是数学概念，那位对离散数学熟悉的给个约定译法。如果离散数学中已经译成分割了，算我没说。   
3.93：预测器 =〉预测值。去掉“指”。逗号换成句号。   
3.94：给出我的翻译：基本编码图像：一个图像的编码表示，它能够被可解码符合本标准的码流的解码过程使用。基本编码图象包含图象中的所有MB。只有这种图象对解码过程有正规影响。参考冗余编码图像。   
3.95：语法子集 =〉一个特定的语法子集。   
3.99：表示RBSP结束的 =〉RBSP 另外，停止还是结束？要与3.100统一。   
3.101：同步 =〉 恢复。可用于随即访问或断线恢复。   
3.102：影响 =〉正规影响。参考基本编码图像。   
3.107：长、短时 =〉长、短期   
3.109：内容应与108相似。另外107-109译得都很准，为什么有（？？？）   
3.111：本标准中 =〉符合本标准的码流中   
3.114: 本标准中未作规定 => 本标准中对显示处理未作规定。宽高比表示为h:v，h是水平宽度，v是垂直高度，以任意单位。 [译注]意指如何处理宽高比未作规定。   
3.115：删除“非0值”。另外，在标准中，系数和系数level（未缩放的系数）是严格区分的，我们怎么办？还是我们统一将它称作系数级？   
3.116：最后一句：[直译]可以把一个SI类型的slice编码使其解码后的图像与SP类型的slice相同。或者：[意译]通过适当的编码，一个SI类型的slice可以解码出与SP类型的slice相同的图像。   
3.117：将被编码为跳过MB =〉应被解码为“跳过”   
3.118：一个slice中的MB或者MB对在一副图象内不一定是连续的。=〉对基本解码图像，将每个slice组分成slice是一个分割。虽然一个slice中包含的宏块或宏块对在slice组中在光栅扫描顺序上是连续的，但在图像中却不一定在光栅扫描顺序上是连续的。 [译注]slice/slice组可能不是总是一整行吧？ “顺序”一词我参考了N5555,2003/3,Pattaya。   
3.119：一个和每一个语法元素相联系的目录 =〉与每个语法元素相联系的类目   
3.120：分割图象为slice组是对图象的分割。后面的注好像不是很精确。我的理解是：映射表达了图像是如何分割的。   
3.121：不要用75，因为编号会变。   
3.123：用来描述视频素材或其编码前属性的术语 =〉用来描述编码前的视频素材或其属性的术语   
3.124：最后一句：一个SP类型的 slice 可以编码成使其解码后构成与另一个SP类型 slice 或 SI类型 slice相同的图像。   
3.125：意义没问题，但太绕口。通过包含一个预防二义字节使得在NAL单元中不会使得开始码前缀发生歧义。=〉通过嵌入预防歧义字节使得在NAL单元中不会出现与开始码前缀相同的内容。   
3.126：数据位组成的字符串 =〉数据位串第一个“表示” =〉出现   
3.127：加上：子宏块的一个角要在原宏块的一个角上。   
3.128: => 为了帧间预测，将子宏块分隔成一个亮度块和两个对应的色差块。 [译注]AVC支持多种比子宏块小的分割。   
3.131：原文似应该：码流中的数据成员。但我也想不清楚这两种译法有什么区别。只是想尊重原文。   
3.132：语法成员 =〉0个或多个语法成员   
3.135：纯粹为了直译：一个标量（[译注]相对于矢量），被认为在频域内，在解码过程的反变换阶段与一个一维或二维的频率索引相关联。这是不是可以证明意译比直译要好呢？   
3.136：变换系数级：[意译] 未做缩放处理前的变换系数。 [直译] （比变换系数还绕人。饶了我们和读者吧。）   
3.137：加上“在通用唯一标识符空间中”   
3.138：可变长编码 =〉变长编码少 =〉较少   
3.139：扫描顺序 =〉排序从 =〉接近于从   
4.3：位率 =〉码率   
4.6：待测解码器   
4.8：假想参考解码器   
4.9：假想码流排队机？？   
4.10：立即解码刷新   
4.16：原始数据串负荷   
4.18：数据位串   
4.23：视频可用性信息