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# ITU-T

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STANDARDIZATION SECTOR  
OF ITU

# G.7043/Y.1343

**Amendment 1**  
(01/2005)

SERIES G: TRANSMISSION SYSTEMS AND MEDIA,  
DIGITAL SYSTEMS AND NETWORKS

Digital terminal equipments – General

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Virtual concatenation of PDH signals

**Amendment 1**

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## Amendment 1 to ITU-T Recommendation G.7043/Y.1343

### Virtual concatenation of PDH signals

#### Summary

This amendment changes the specification of frame formats from nibbles to octets.

#### Change the following text in clause 6.4:

#### **6.4 Interface at $N \times 44736$ kbit/s with virtual concatenation of a clear channel payload**

##### **6.4.1 Multiframe format for $N \times 44736$ kbit/s**

The multiframe structure 44736 kbit/s signal described in ITU-T Rec. G.704 shall be used. For the case of an  $N \times 44736$  kbit/s signal, the first octet ~~(two nibbles)~~ following the first framing bit (X1) of the multiframe is used to carry the concatenation overhead in each constituent 44736 kbit/s signal, as illustrated in Figure 6-8. This octet is reserved for all values of  $N$  ( $N=1 \dots 8$ ).

##### **6.4.2 Concatenation of $N$ 44736 kbit/s signals**

The concatenation overhead octet allows the virtual concatenation of  $N$  44736 kbit/s signals to form a single channel referred to as a virtually concatenated group (VCG). The payload container bandwidth of the resulting VCG is  $N \times (44736)[(7)(680 - 8) - 8]/[(7)(680)]$  kbit/s  $\approx N \times 44134$  kbit/s. Client data signals are mapped into the  $N$  44736 kbit/s signal members of the VCG on a ~~nibble~~~~octet~~-wise, round robin basis. The round robin sequence follows the ascending order of the per-member sequence numbers that are communicated in each member's concatenation overhead octet. For example, if ~~the most significant nibble of GFP frame data packet's octet 1 is mapped into the 44736 kbit/s signal with sequence number 0, the least significant nibble of GFP frame octet 1 next packet octet~~ is mapped into the 44736 kbit/s signal with sequence number 1, ~~the most significant nibble of GFP frame octet 2 is mapped into the 44736 kbit/s signal with sequence number 2,~~ etc. Up to eight 44736 kbit/s signals can be virtually concatenated into a single VCG.

*Note: The bits F1, F2, F3 and F4 will be located in the middle of a data packet's octet*

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