SONET/SDH

Dronacharya College of Engineering

Figure 20-1

A SONET System

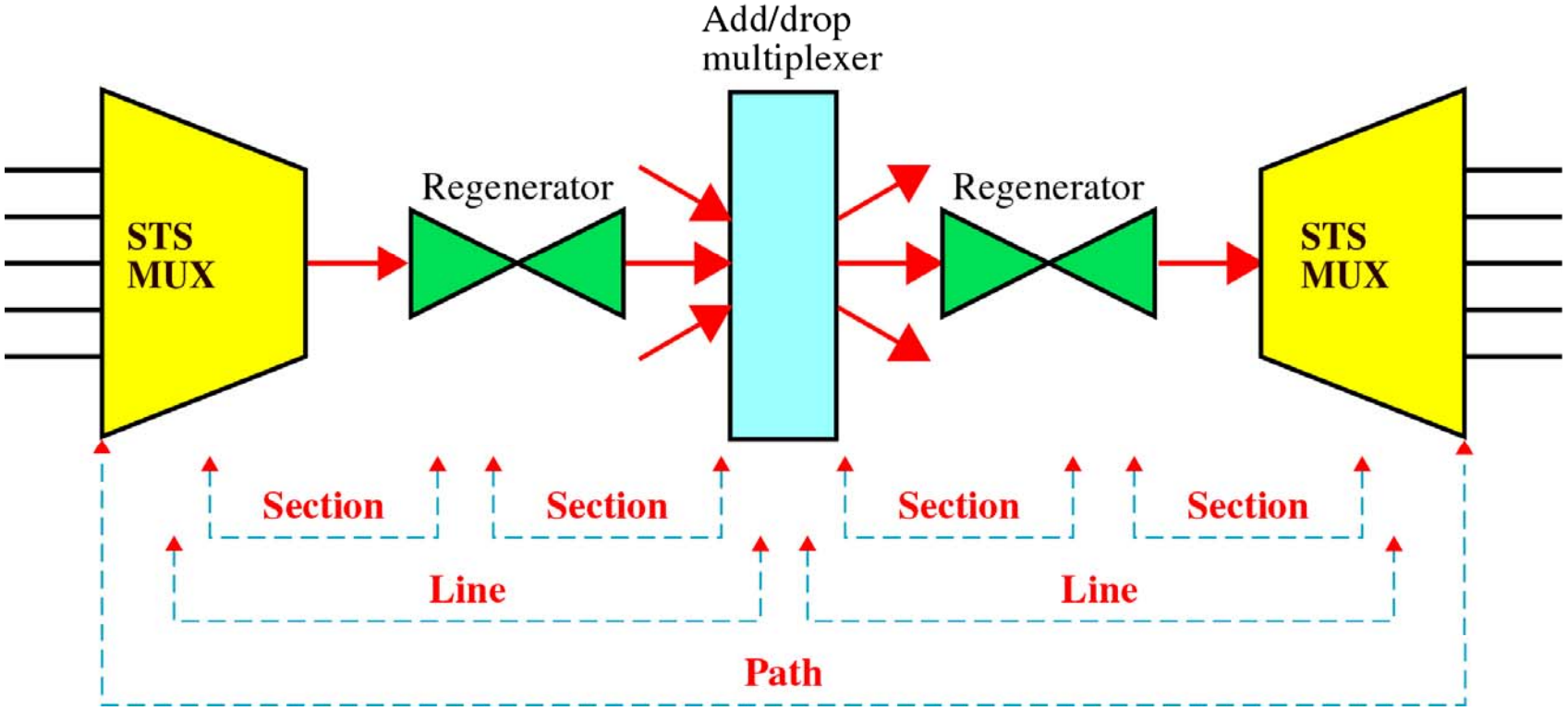


Figure 20-2

An Example of a SONET Network

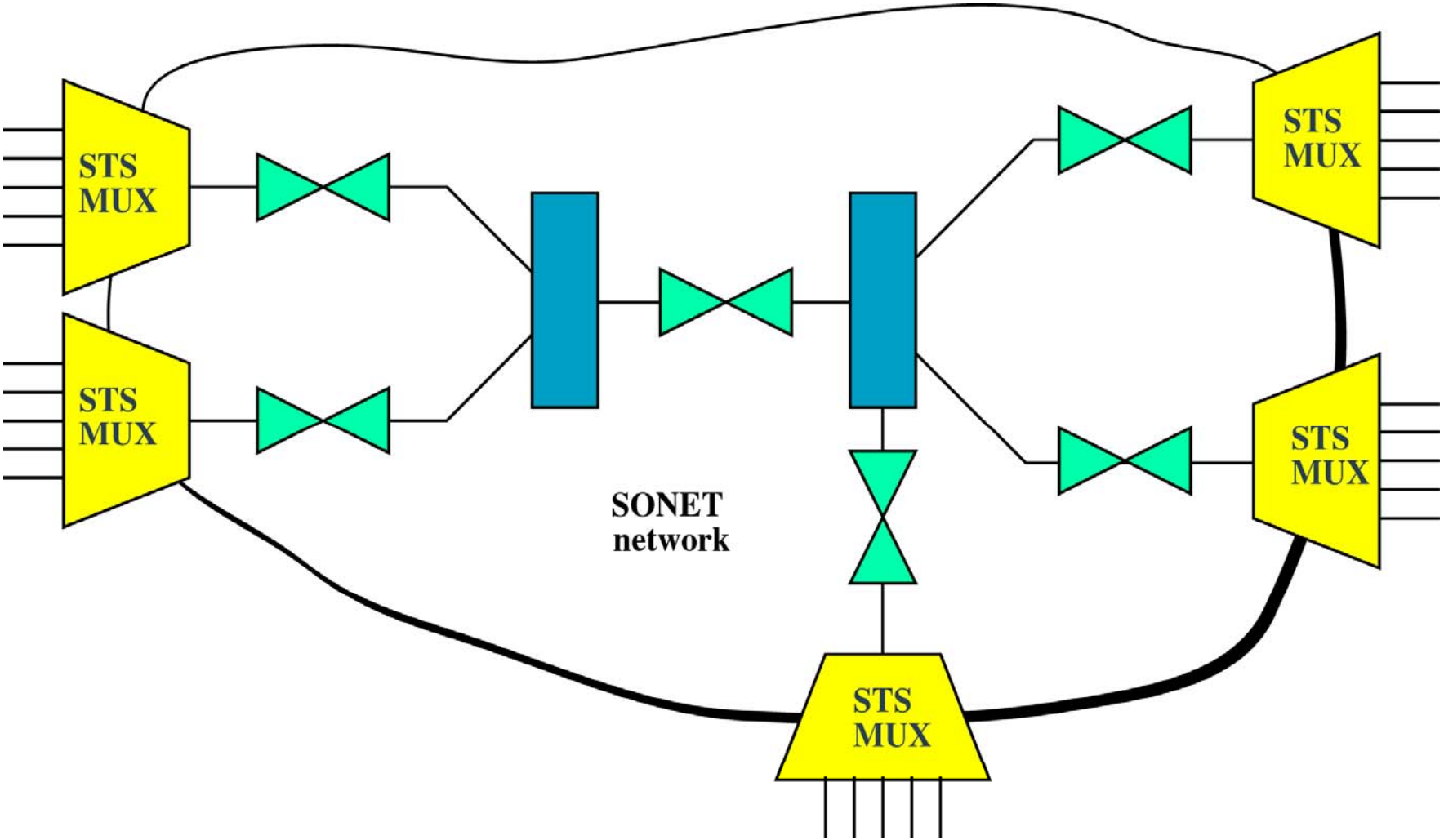


Figure 20-3

SONET Layers

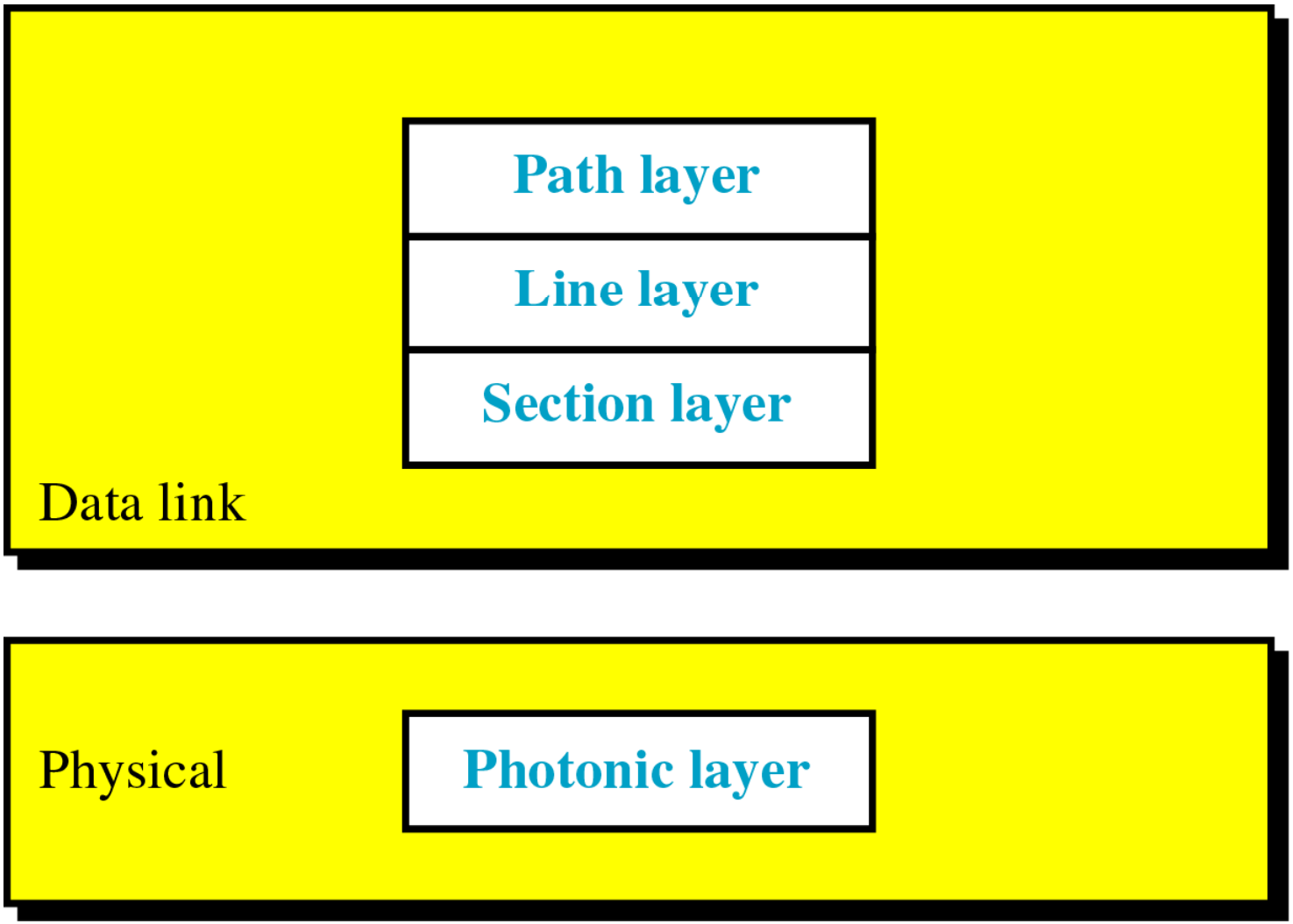


Figure 20-4

Device-Layer Relationship in SONET

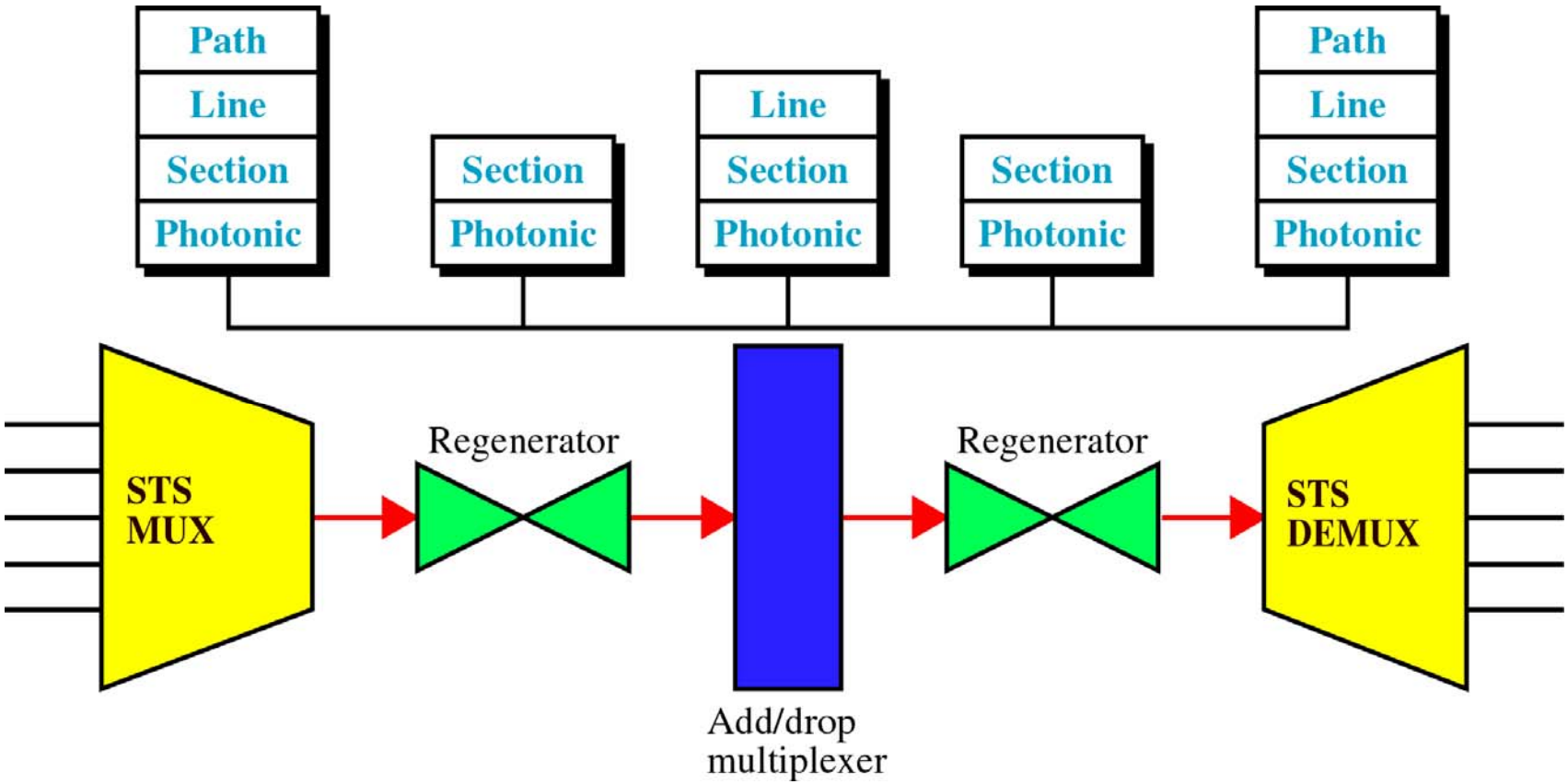


Figure 20-5

Data Encapsulation in SONET

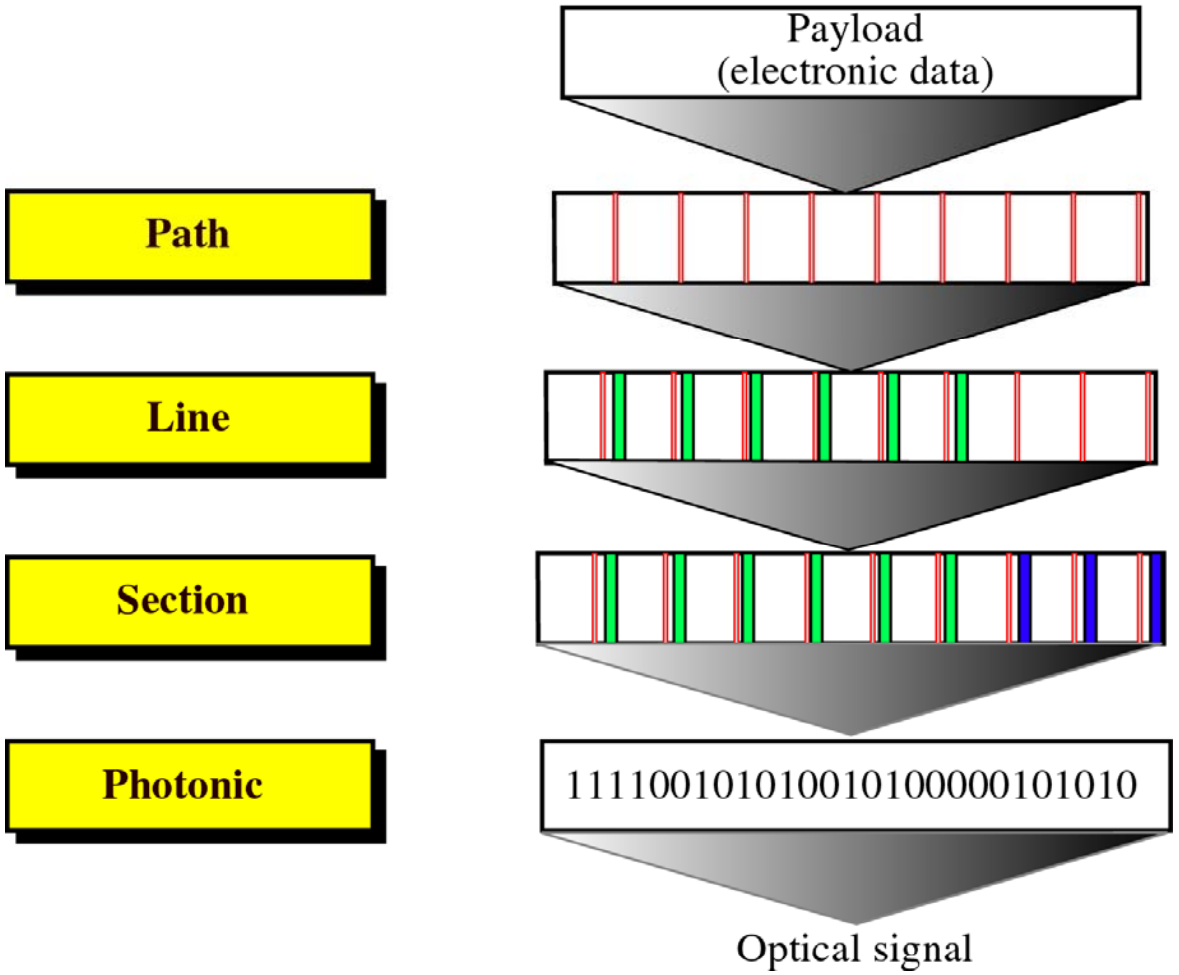


Figure 20-6

STS-1 Frame

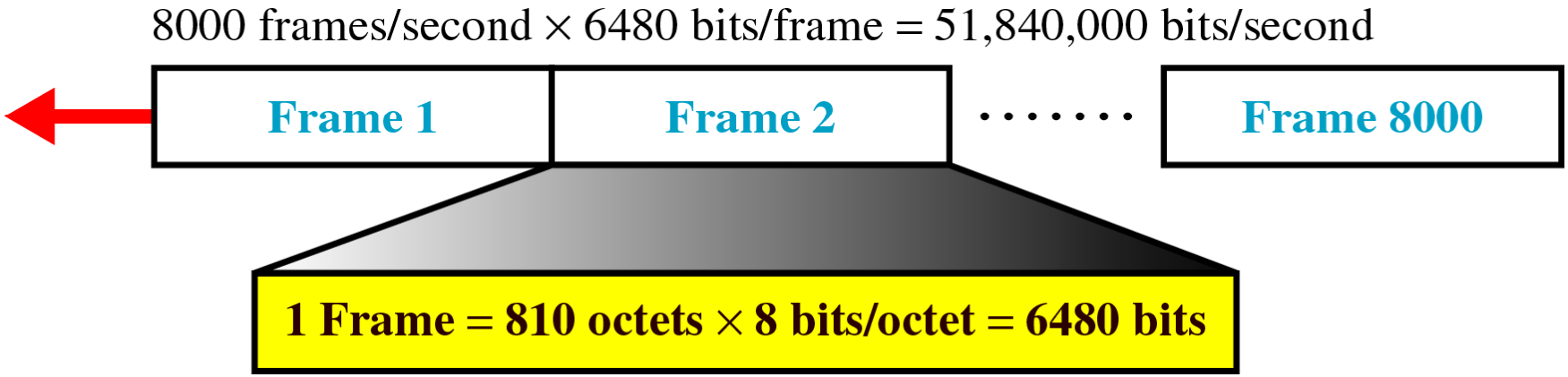


Figure 20-7

STS-1 Frame Overhead

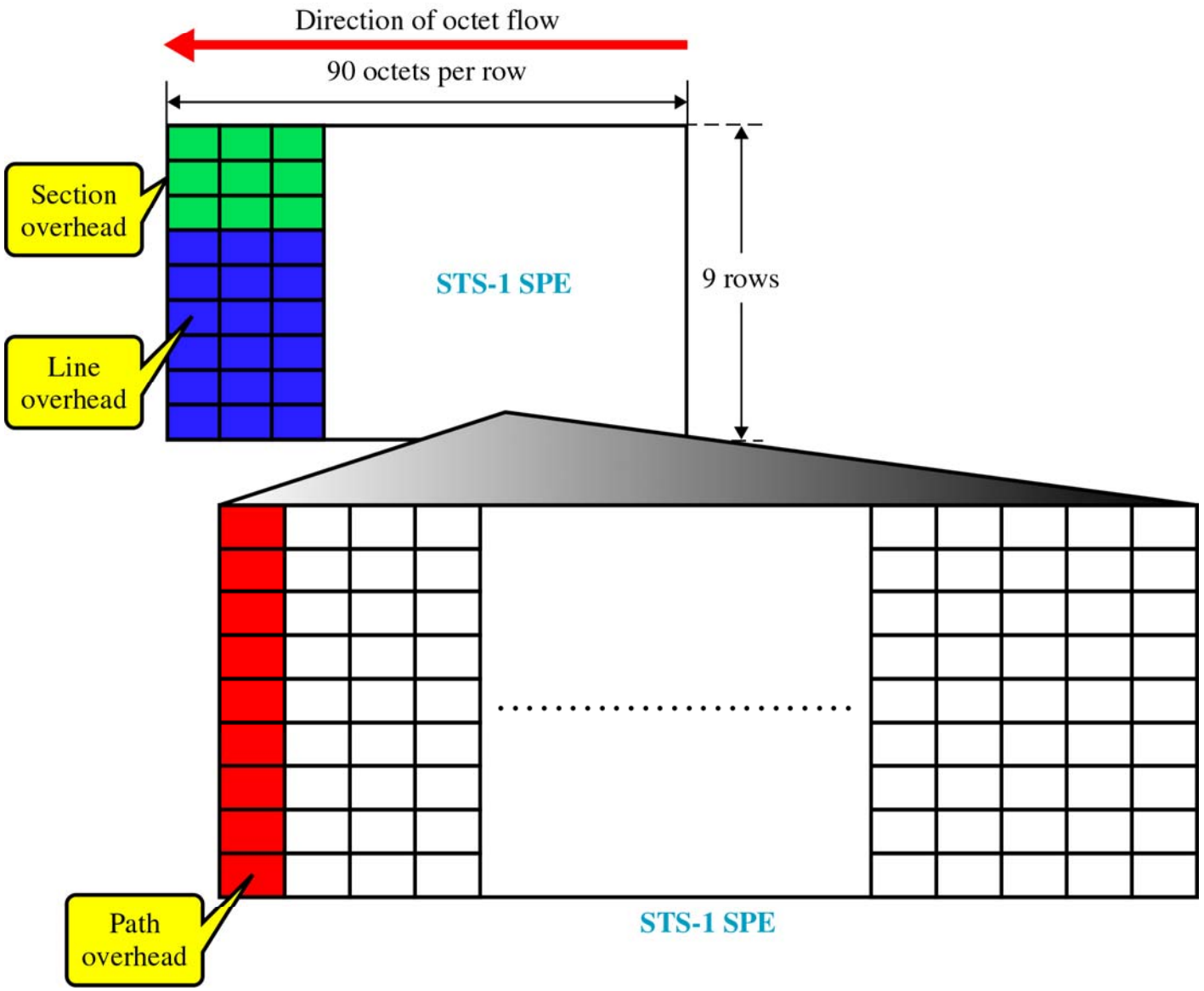


Figure 20-8

STS-1 Frame Section Overhead

A1: Alignment 1
A2: Alignment 2
C1: Identification
B1: Parity byte
E1: Orderwire byte
F1: User
D1: Management
D2: Management
D3: Management

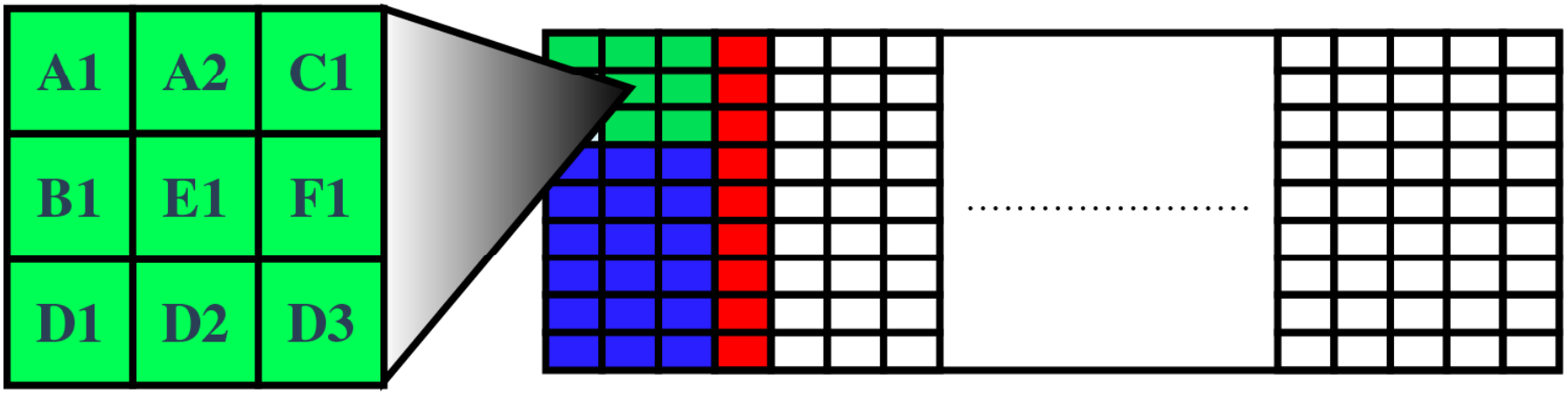


Figure 20-9

STS-1 Frame Line Overhead

H1, H2, H3: Pointers
K1, K2: Automatic protection switching bytes
D4-D12: Data communication channel bytes

B2: Line parity byte
E2: Orderwire byte
Z1, Z2: Growth bytes

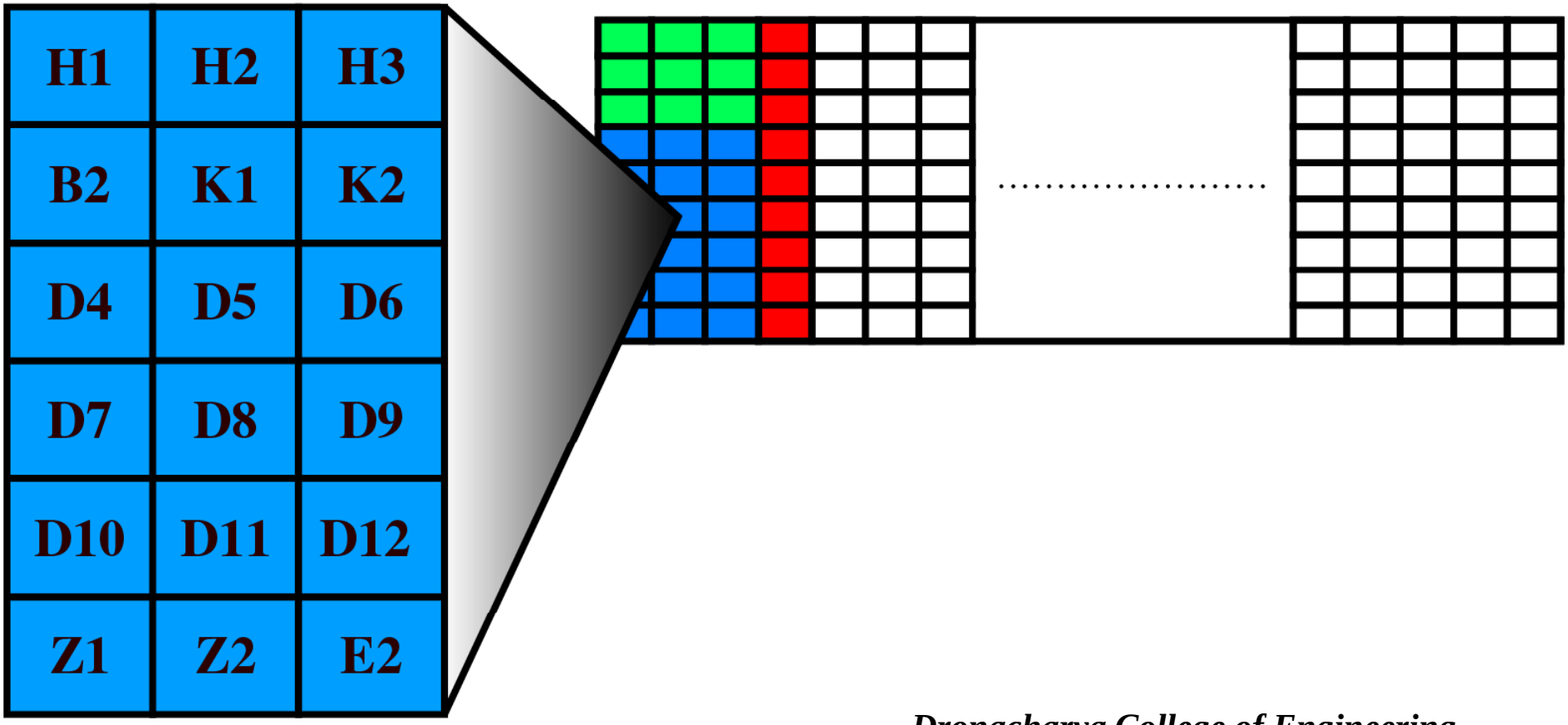


Figure 20-10

Payload Pointers

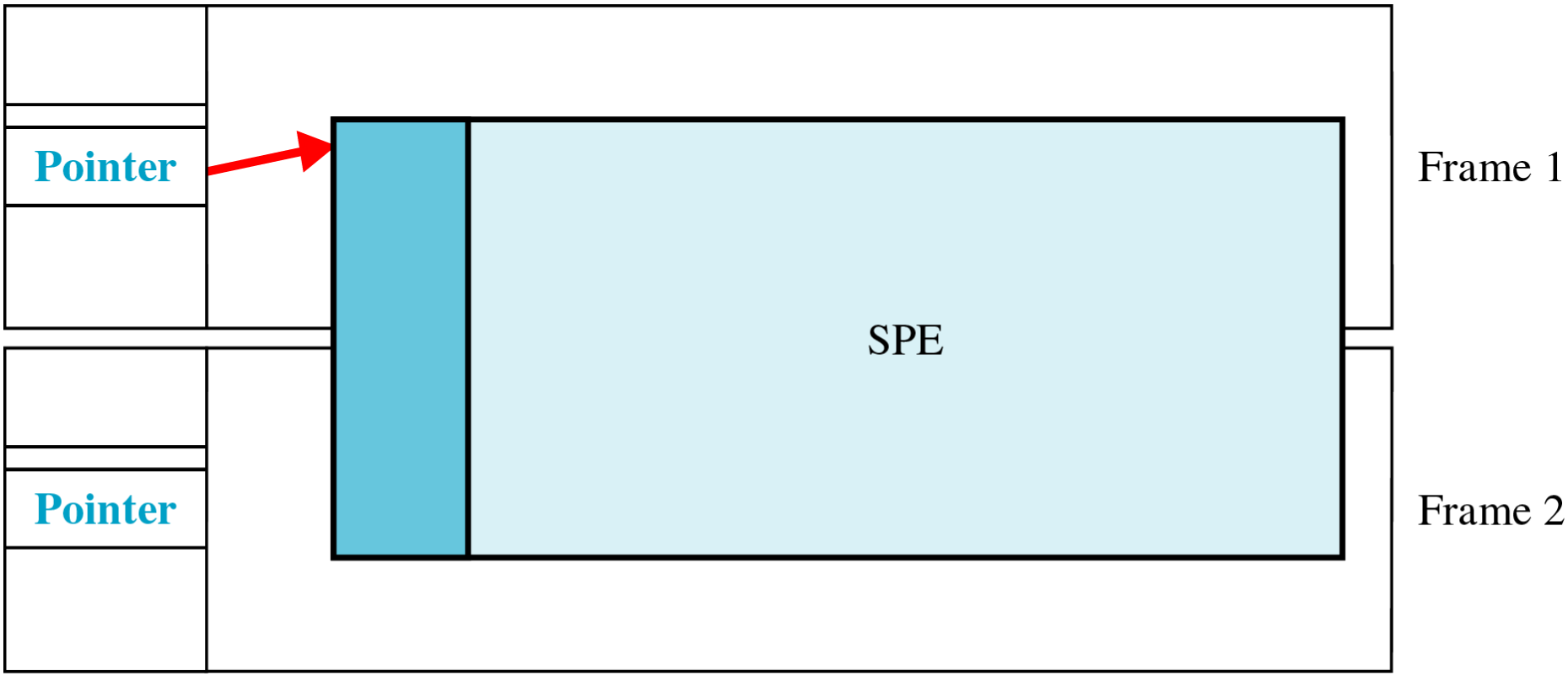


Figure 20-11

STS-1 Frame Path Overhead

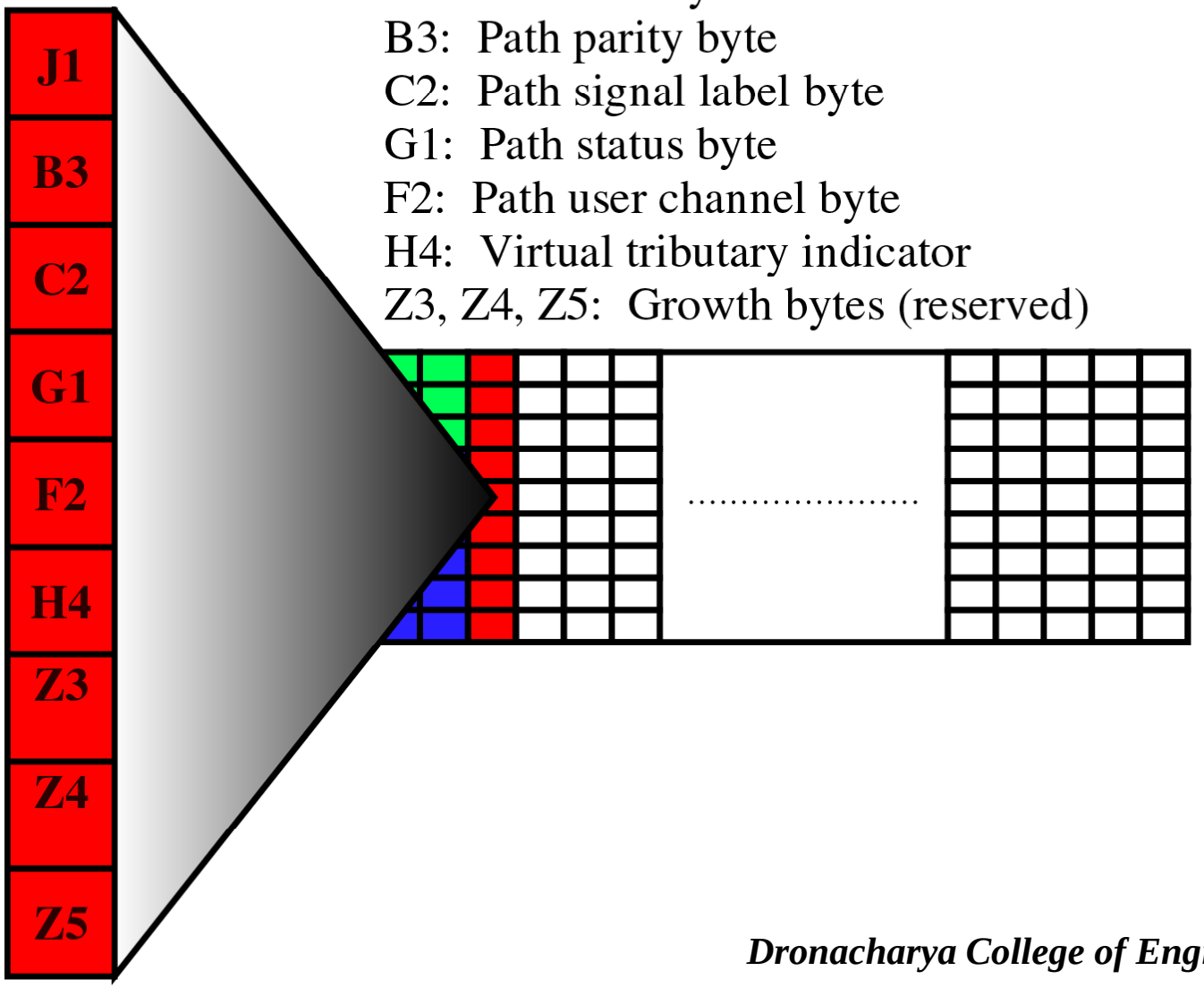


Figure 20-12

Virtual Tributaries

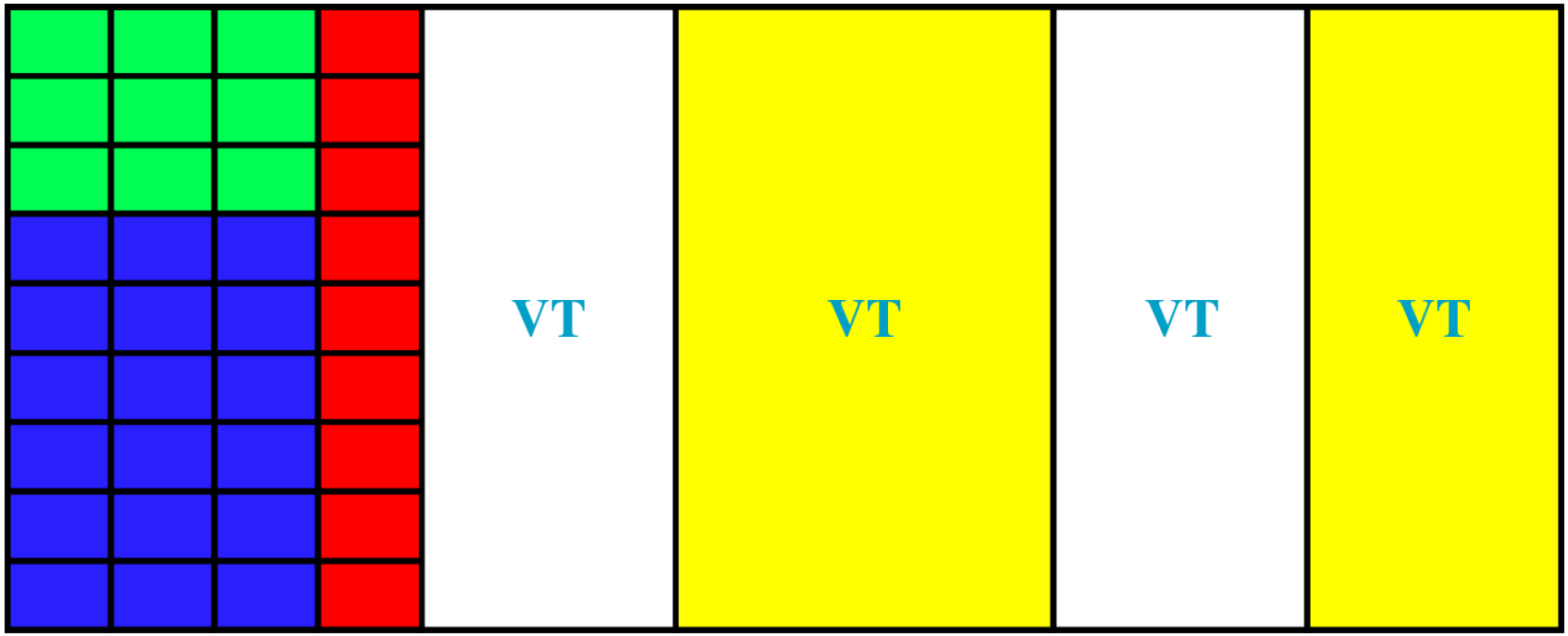
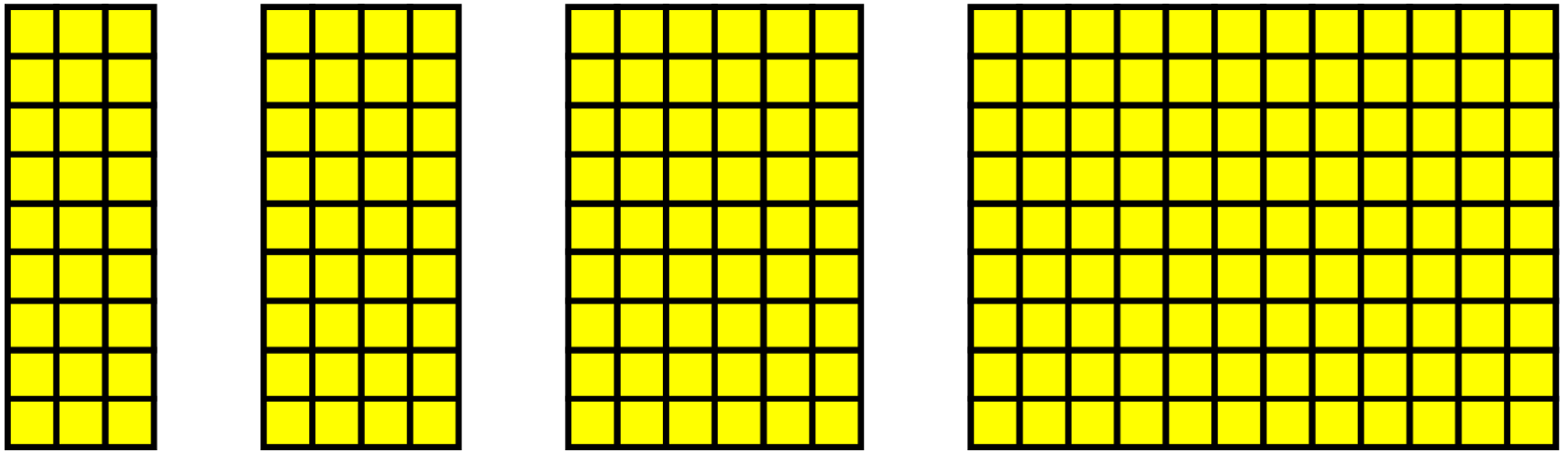


Figure 20-13

VT Types

VT1.5 = 8000 frames/s × 3 columns × 9 rows × 8 bits = 1.728 Mbps
VT2 = 8000 frames/s × 4 columns × 9 rows × 8 bits = 2.304 Mbps
VT3 = 8000 frames/s × 6 columns × 9 rows × 8 bits = 3.456 Mbps
VT6 = 8000 frames/s × 12 columns × 9 rows × 8 bits = 6.912 Mbps



VT1.5 VT2 VT3 VT6

Figure 20-14

STS-n

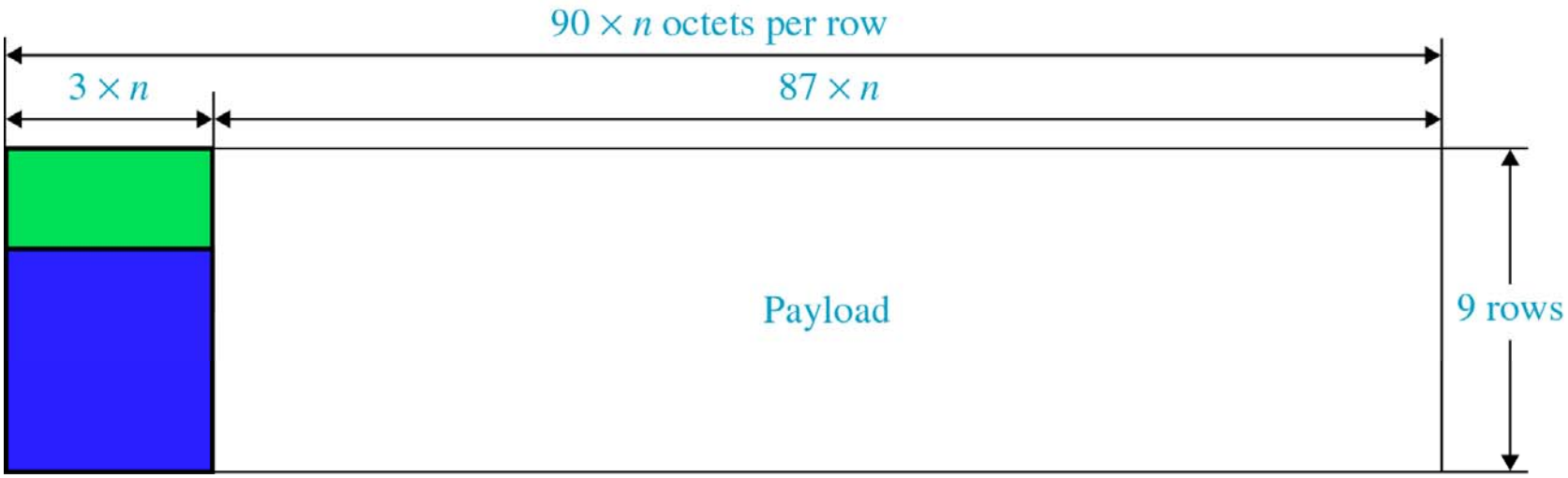


Figure 20-15

STS Multiplexing

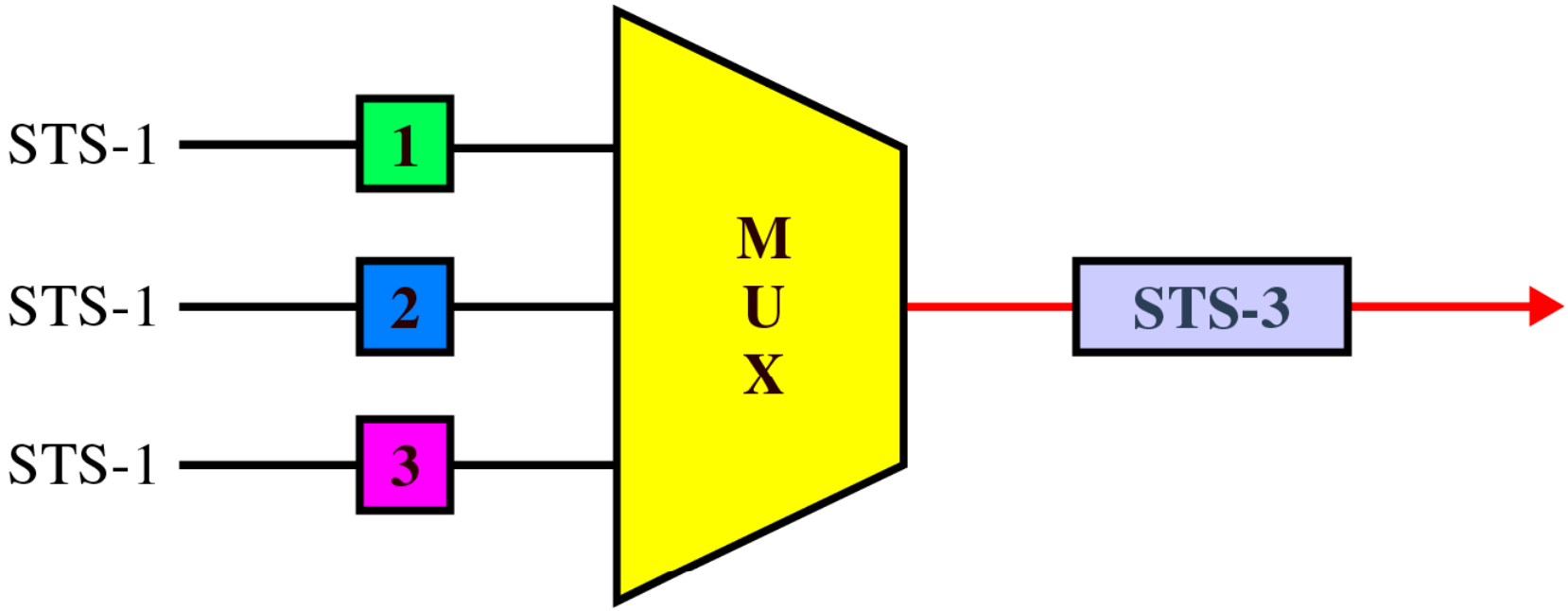


Figure 20-16

ATM in an STS-3 Envelope