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	SONET		SDH	Data rate (Mbps)				
	Electrical	Optical	Optical	Gross	SPE	User		
	STS-1	OC-1		51.84	50.112	49.536		
	STS-3	OC-3	STM-1	155.52	150.336	148.608		
	STS-9	OC-9	STM-3	466.56	451.008	445.824		
	STS-12	OC-12	STM-4	622.08	601.344	594.432		
	STS-18	OC-18	STM-6	933.12	902.016	891.648		
	STS-24	OC-24	STM-8	1244.16	1202.688	1188.864		
	STS-36	OC-36	STM-12	1866.24	1804.032	1783.296		
	STS-48	OC-48	STM-16	2488.32	2405.376	2377.728		
	STS-192	OC-192	STM-64	9953.28	9621.504	9510.912		
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Circuit Switching vs. Packet Switching							
ltem	Circuit-switched	Packet-switched					
Call setup	Required	Not needed					
Dedicated physical path	Yes	No					
Each packet follows the same route	Yes	No					
Packets arrive in order	Yes	No					
Is a switch crash fatal	Yes	No					
Bandwidth available	Fixed	Dynamic					
When can congestion occur	At setup time	On every packet					
Potentially wasted bandwidth	Yes	No					
Store-and-forward transmission	No	Yes					
Transparency	Yes	No					
Charging	Per minute	Per packet					
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