3. ATM adaptation layer(AAL)

- AAL is analogous to the data link layer of the OSI model
- AAL is responsible for isolating higher-layer protocols from the details of the ATM processes
- AAL prepares user data for conversion into cells and segments the data into 48-byte cell payloads
- AAL layer is split into two sublayers: 1.SAR (Segmentation and Reassembly) sublayer 2. CS (Convergence Sublayer) sublayer

SAR

- The main task of SAR sublayer is Segmentation and Reassembly
- The SAR sublayer breaks up packets into cells on the transmission side and puts them back together again at the destination

CS

- The main task of CS sublayer is providing the standard interface(Convergence)
- The CS sublayer offer various types of services to different applications (e.g., file transfer and video on demand have different requirements concerning error handling, timing, etc.)
- Finally, the higher layers residing above the AAL accept user data, arrange it into packets, and pass it to the AAL
- The ATM layers and sublayers, and their functions is shown in below table

OSI layer	ATM layer	ATM sublayer	Functionality
3/4	AAL	CS	Providing the standard interface (convergence)
		SAR	Segmentation and reassembly
2/3	ATM		Flow control Cell header generation/extraction Virtual circuit/path management Cell multiplexing/demultiplexing
2	Physical	TC	Cell rate decoupling Header checksum generation and verification Cell generation Packing/unpacking cells from the enclosing envelope Frame generation
1		PMD	Bit timing Physical network access