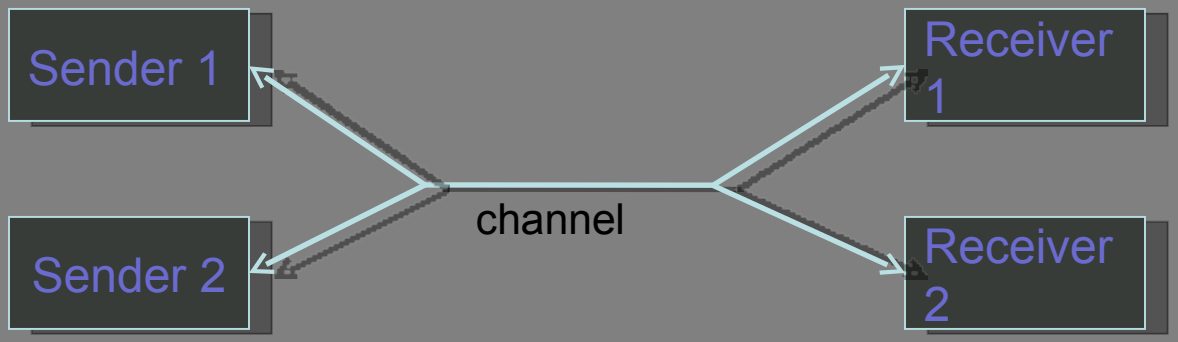
Static channel allocation

1. Time Division Multiplexing.
2. Frequency Division Multiplexing.

Frequency division multiplexing

- Bandwidth of link > Combined bandwidth of transmitted signals.

- Number of users are fixed.
- Multi access channel (Multiple transmitters and multiple receivers)



Static channel allocation

- If the spectrum Is cut into N portions and the number of users are less than N; then a large piece of spectrum is wasted.

- If more than N users want to communicate, some of them will be denied permission for the lack of bandwidth.

Time division multiplexing

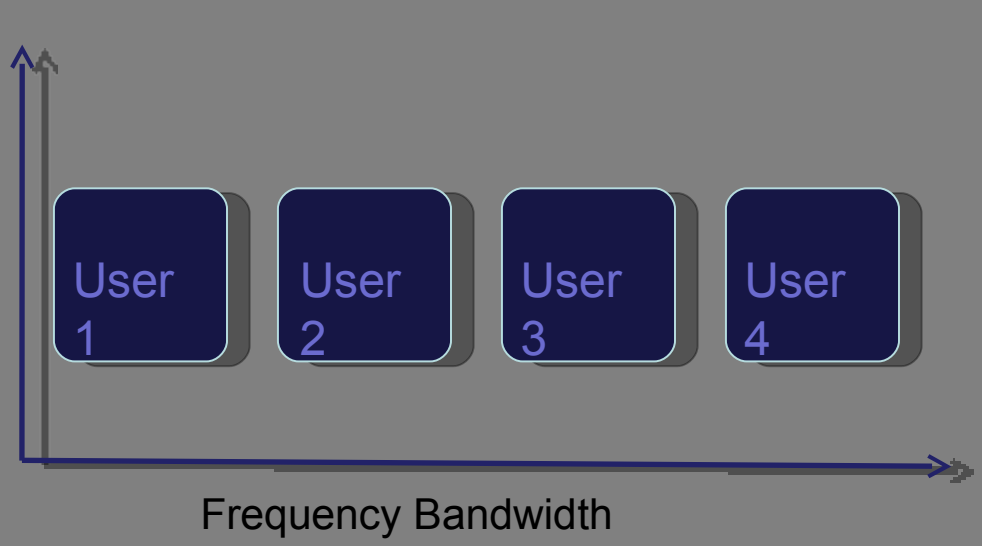
The same arguments that apply to FDM also apply to time division multiplexing (TDM).

- Each user is statically allocated time slot, and if the user does not use the given time slot, it just lies fallow.

- Delay Time for the new users.
- New users will wait while channel is already in use.
- Time consumption.
- Reduced efficiency.

Allocating channels

- N users ≈≈ n parts of channel



- Each part allocated to each user so that initially no user has to wait and same user uses that frequency band always.
- New users wont be able to use the channel until the whole channel is made free and therefore time consumption will be more.