States in STG:-

1) Invalid
2) Unique Clean
3) Shared
4) Unique Dirty
5) Shared Dirty

Signals on Snoop Channels:-

Snoop Address Channel:-

1) ACSNOOP:- Snooptype (e.g Clean Shared etc)
2) ARADDR:- Snoop address
3) ARVALID:- Snoop address valid
4) ARREADY:- Snoop address Ready

Snoop Response Channel:-

1) ACRESP:- Snoop Response (e.g OKAY, DATA)
2) ACRESPVALID:- Snoop Response Valid
3) ACRESPREADY:- Snoop Response Ready
4) RDATA:- Read data from cache

State transition diagram with the following states and transitions:

States: Invalid, Unique Clean, Shared, Unique Dirty, Shared Dirty

- AWREADY AWVALID MAKE Invalid → Invalid
- ARREADY ARVALID MAKEInvalid → Invalid
- Invalid → Unique Clean: ARVALID, ARREADY, READONCE / RDATA
- Invalid → Unique Dirty: ARVALID, ARREADY, WRITELINE UNIQUE
- Invalid → Unique Dirty: AWVALID, AWREADY, WRITELINE UNIQUE / WREADY
- Unique Clean → Shared: ARVALID, ARREADY, READONCE / RDATA
- Unique Clean → Unique Dirty: AWVALID, AWREADY, WRITELINE UNIQUE / WREADY
- Shared → Shared Dirty: AWVALID, AWREADY, WRITELINE UNIQUE / WREADY
- Shared Dirty → Unique Dirty: ARVALID ARREADY READONCE / RDATA