

## Frame Forwarding (Ver 1.0 – store-and-forward, with VLANs)

Here's a better version of frame forwarding, but it's still only ver 1.0; it doesn't consider ACLs, QoS, or overload conditions.

1. Receive entire frame [input buffer]
2. Re-compute CRC
3. Discard frame if bad CRC; otherwise continue processing
4. Determine VLAN:
  - for access ports, according to configured VLAN
  - for trunk ports, according to VLAN tag on frame (or Native VLAN if no tag)
5. Look in MAC address table, according to VLAN, for possible match
  - if match, then select single egress port/trunk
  - if no match, then select flooding as egress method
6. Determine whether to add or strip VLAN tag:
  - Add a tag if passing from access to trunk (new tag = access VLAN #)
  - Strip the tag if passing from trunk to access
  - No change if not crossing access / trunk boundary
7. If VLAN tag added or stripped, re-do CRC
8. Queue the frame on selected egress port(s) [output buffer(s)]