

# FCAV Testbench by SPV

SPV Objects in use:

- SPV Packet Generator
- SPV Image
- SPV Application Wizard
- SPV Coverage
- SPV Common Classes

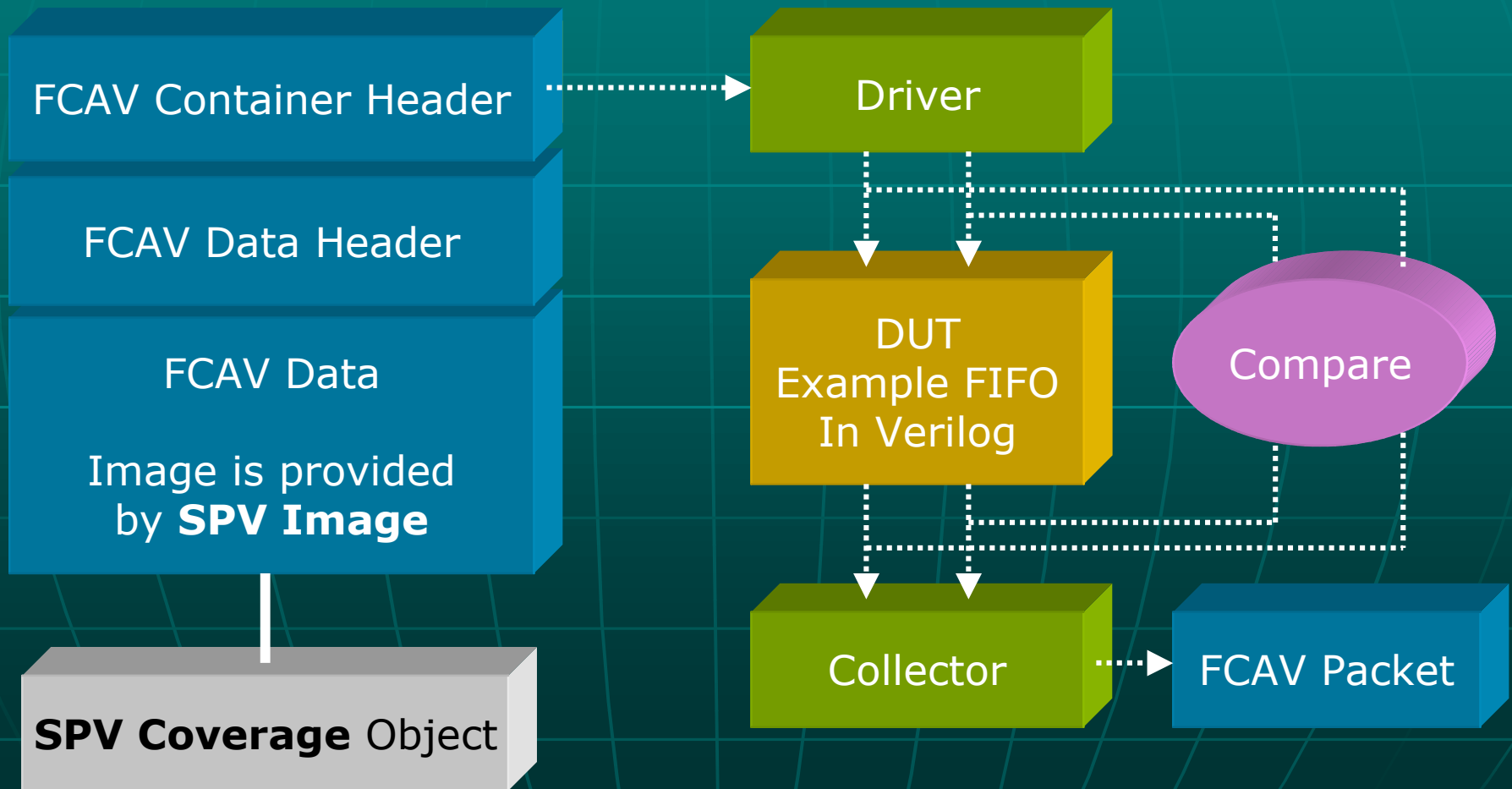
# Goals

- Create a legal FCAV structure using SPV **Packet Generator**.
- **Drive** the packet data into the DUT's (Device Under Test) data\_in signal.
- **Collect** the data from the data\_out signal in the DUT and reconstruct the FCAV Packet.
- Create a **compare** object which can compare input data to output data independently.
- Collect **Coverage** on few FCAV packet fields.
- Display the image that is collected from the FCAV packet to the user.
- **Coverage** will be collected while FCAV packet is being constructed.

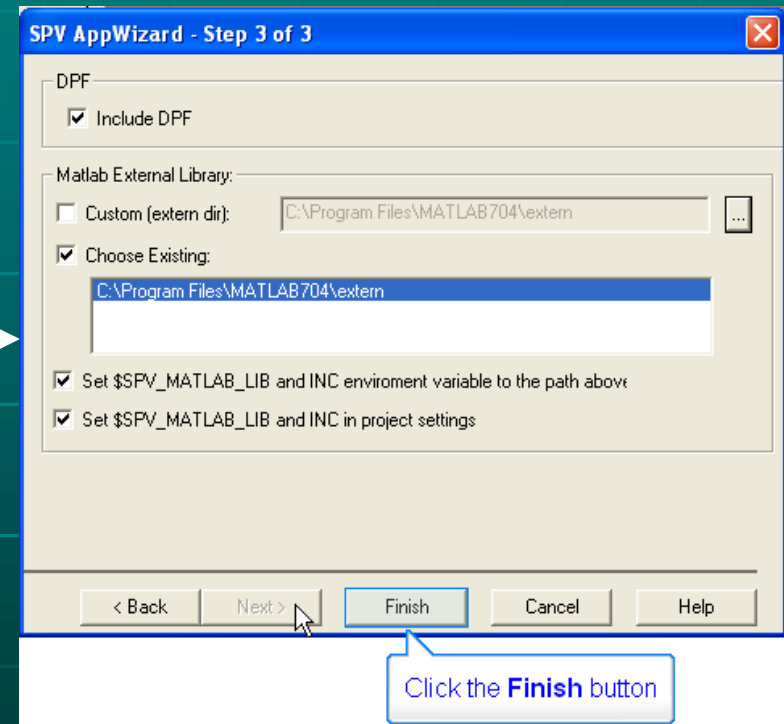
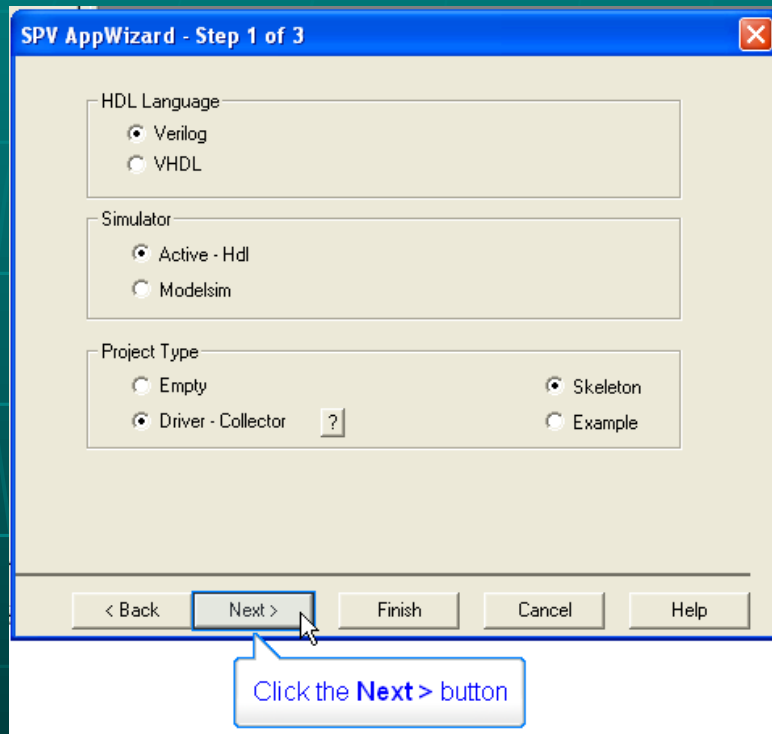
# Block Diagram

FCAV Packet – Using SPV Packet Generator

Driver-Collector example using SPV Application Wizard



# SPV Application Wizard

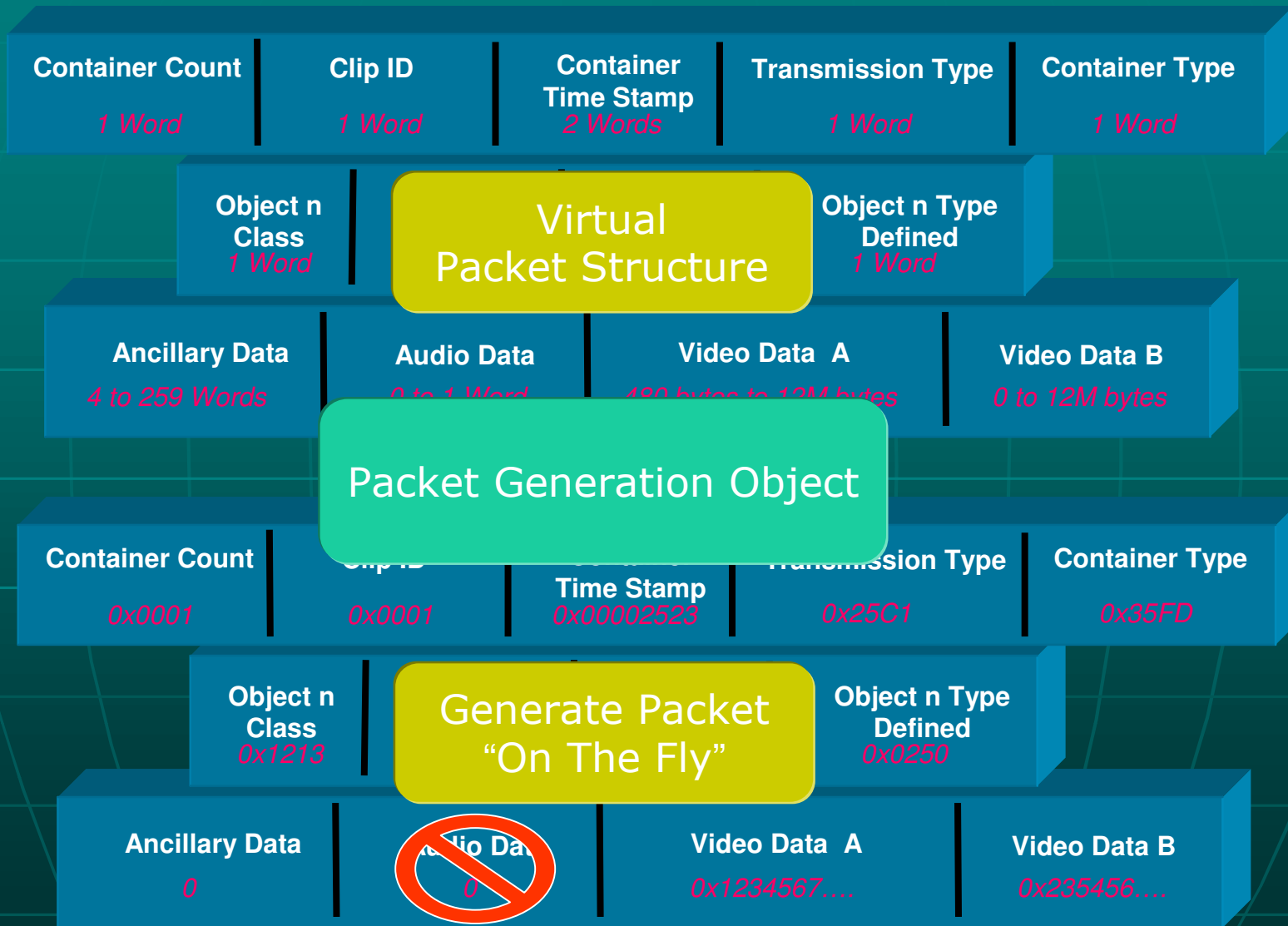


# SPV Image

## *Software to Hardware*

- Transforms any image (Bmp, Jpeg, Gif, Tiff, Jpeg2000) to a bit vector.
- Ability to get any pixel and represent it in integer format, using `GetPix(x,y)` and knowing its state using `GetPixState(x,y)`.
- Iterate functions – `GetNextPixel`, `SetNextPixel`, Etc.
- Image Transform – Interlaced (Odd/Even) divider, Mirror, Flip, Rotate.
- Static Image Functions – `DiffImages`, `ImagesEqual`.
- Other Abilities – `GetSection`, `ReplacePixValue`, `SaveImage`.

# SPV Packet Generator



# SPV Coverage

spv\_Coverage Analysis

File

Name  
port\_Class0  
port\_Class1

Info of field

Coverage%	Efficiency%	Seed	Total Combinations
71.875	46.0	1	32
0,0,0			
2 Fields			
0,0	0	2	2
0,3	3	2	1
1,2	1	3	0
2,1	1	5	2
3,0	4	1	1
3,3	1	0	0
4,2	4	0	1
5,1	0	2	2
6,0	0	0	2
6,3	2	1	2
7,2	0	5	

Test No.  
8