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 FCAV Container Header Driver FCAV Data Header DUT FCAV Data DUT Mage is provided DUT by SPV Image Outperlog

Collector

FCAV Packet

SPV Coverage Object

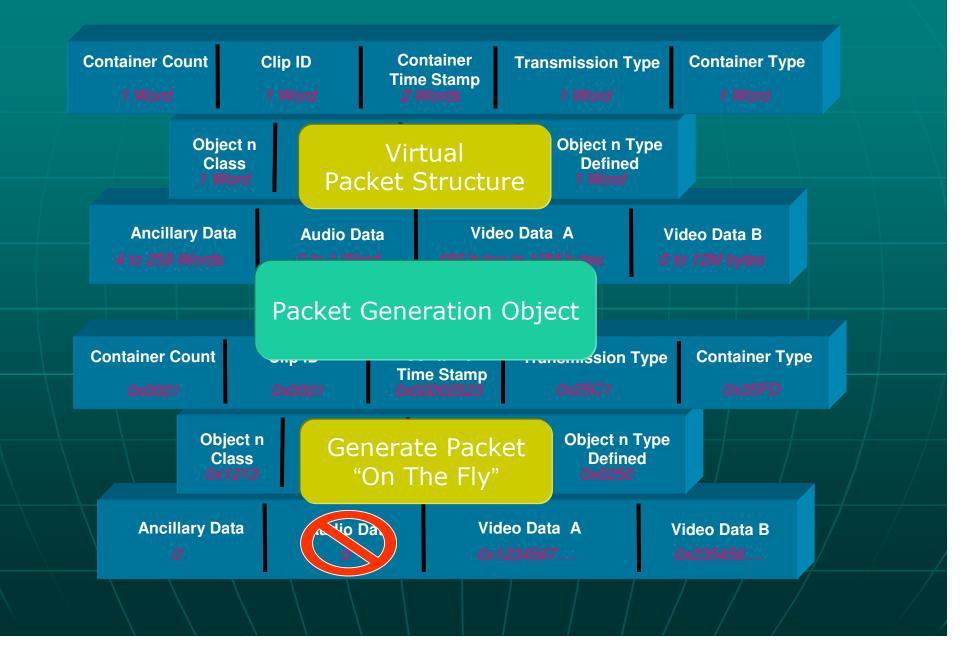
SPV Application Wizard

	SPV AppWizard - Step 3 of 3	
IDL Language		
Verilog	Include DPF	
C VHDL	Matlab External Library:	
imulator	C:\Program Files\MATLAB704\exter	m
Active - Hdl	Choose Existing:	-
C Modelsim	C:\Program Files\MATLAB704\extern	
roject Type C Empty © Skeleton	✓ Set \$SPV_MATLAB_LIB and INC enviroment variable to the pa	ath above
C Empty C Example C Example	✓ Set \$SPV_MATLAB_LIB and INC in project settings	
Back Next > Finish Cancel H	Ip Kack Next Finish Cano	cel Help
Click the Next > button	Click the Finis	sh button

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

File					
Name	Info of field	•			
port_Class0	Coverage%	Efficiency%	Seed	Total Combinations	
port_Class1	71.875	46.0	1	32	
		0,0,0		/ []	
	2 Fields	0,0,0			
	0,0 0	2	2		
	0,3 3	2	1		
	§ 1,2 1	3	0		
	2,1 1 3,0 4	5	2		
	3,0 4	1	1		
	3,3 1 4,2 4 5,1 0	0	0		<u> </u>
	4,2 4 51 0	2	2		
	6.0 0	0	2		/ /
	6,3 <mark>2</mark> 7,2 0	1	2		//
	7,2 0	5			
Test No.					/
8					/