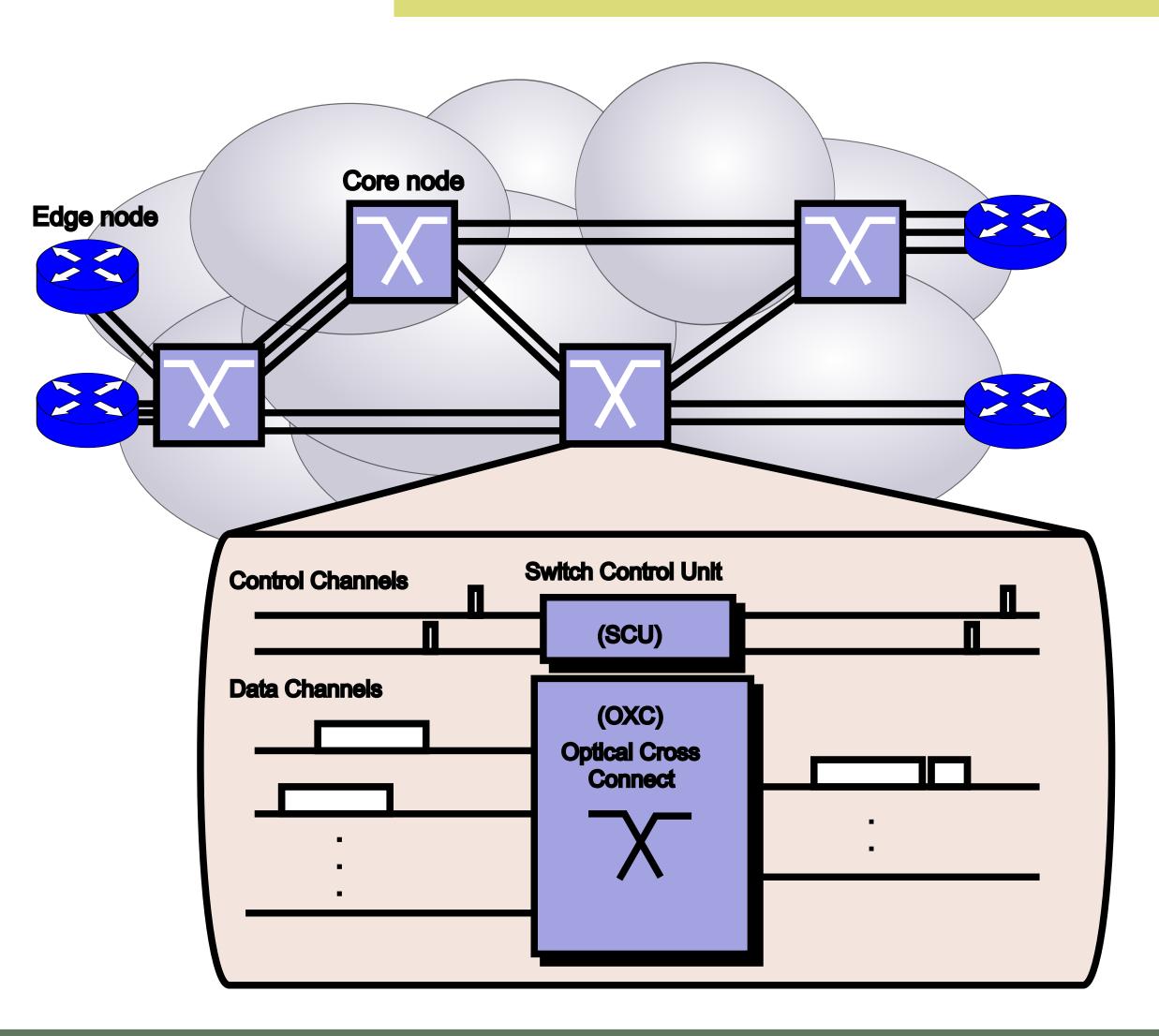


# Video over OBS Networks

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- Video distribution to home subscribers is already being offered as triple play services
- High definition video distribution will require much higher capacity from the optical network
- OBS offers the high speed needed for future "killer" applications...
- But it is not clear if it offers the needed QoS (latency, ...)

burstifier[2]

edge2

EdgeNodeTest.edge1.obs.assembler

sender

## Project STRRONG (Real Time Services for Next Generation Optical Networks)

- Introduce traffic models for real time services over OBS networks
- Develop a reference OBS network model to distribute real time services
- Compare performance of proposed model to previous non-OBS architectures

#### **OBS** network simulator

host2

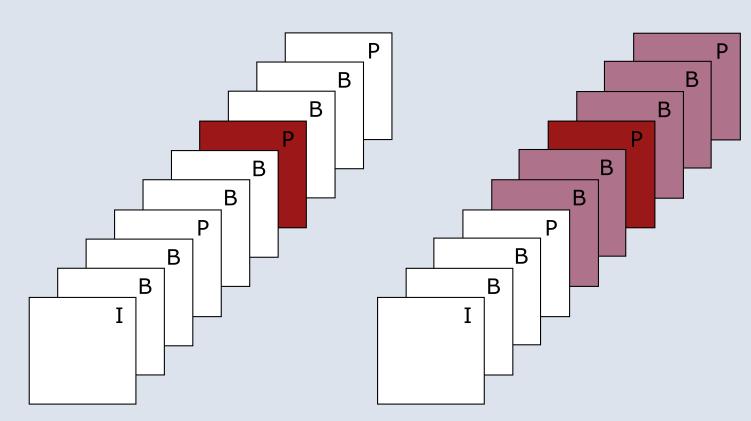
- Based on OMNET++
- Open source
- Support for multiple burst formation and scheduling mechanisms
- Edge and core node models
- Extensible

## WORK IN PROGRESS

perdidasOBS

#### Video

- MPEG frame types I, B, P
- GOP structure GxBy
  G12B2 = IBBPBBPBBPBB
- Inter-frame dependence



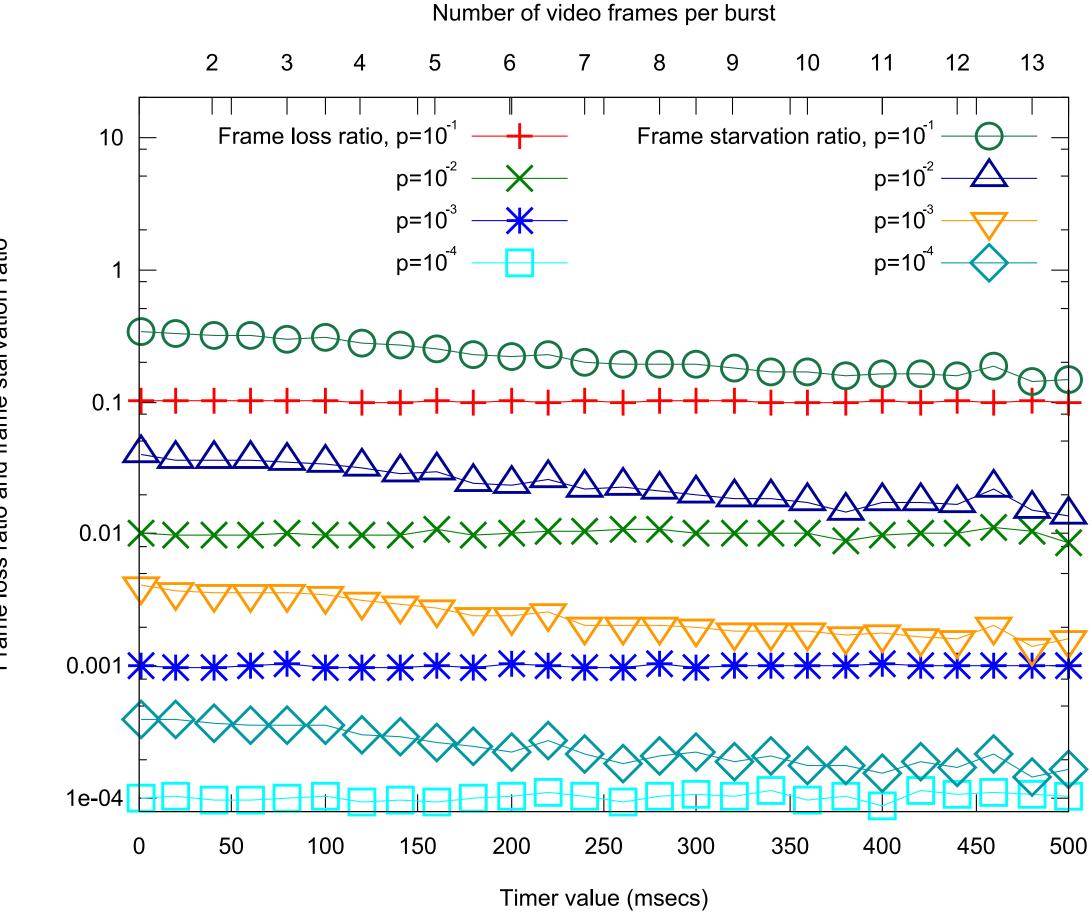
Example of Inter-frame depende

## **Preliminary results**

Number of nondecodableframes >> lost bursts

edge1

- Improves with larger timers
- The effect of losses depends on GoP structure



# Video over OBS problems - Timer in hurstifiers interacts

- Timer in burstifiers interacts with video parameters (fps)
- One lost burst may drop several frames
- One missing frame could turn other frames into nondecodable

## 

Timer value (msecs)

### Next problems

- Analytical studies
- Timing effects (latency, jitter...)
- Other burstifiers

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