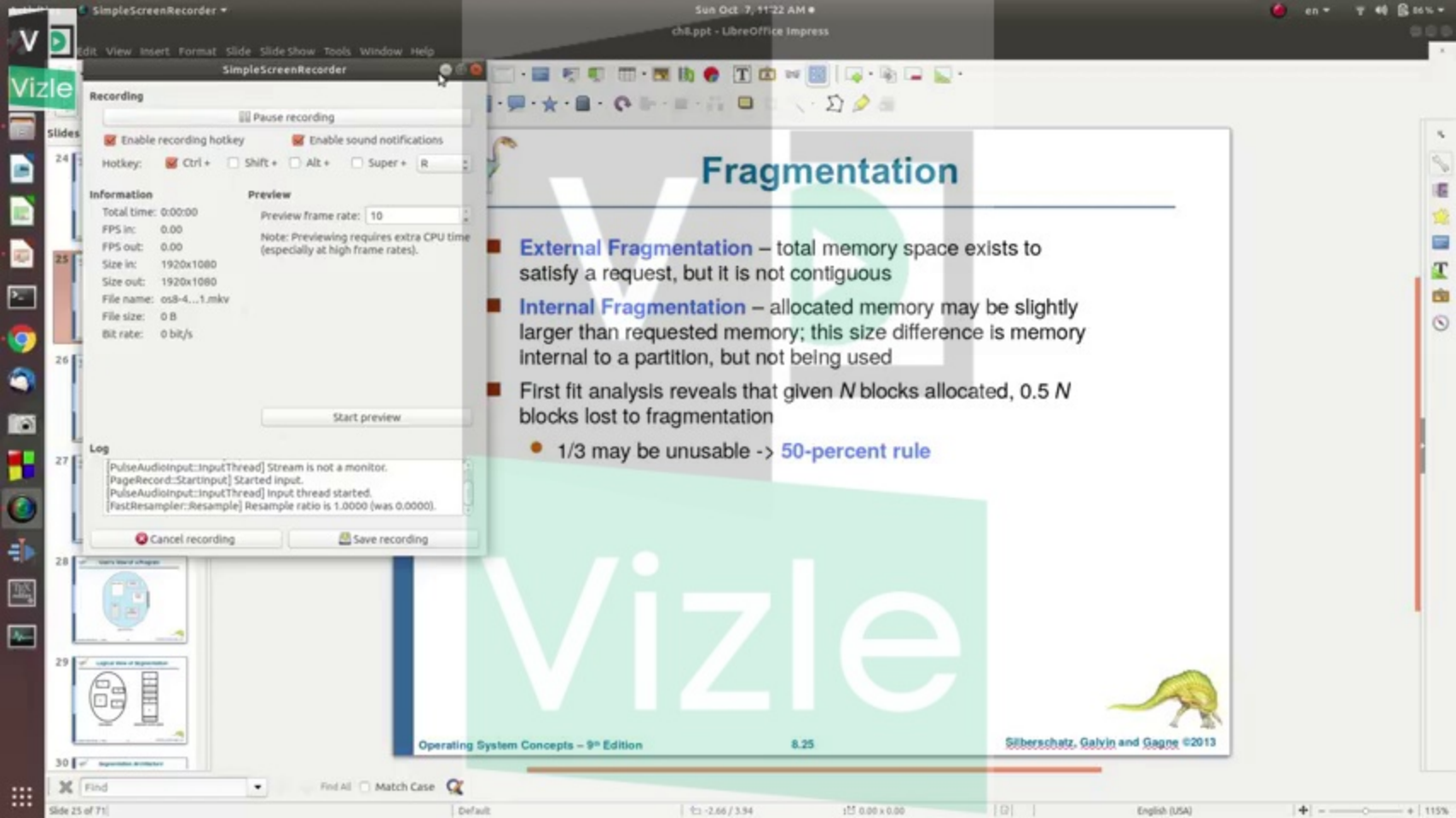
SimpleScreenRecorder
Sun Oct 7, 11:22 AM
ch8.ppt - LibreOffice Impress
Edit View Insert Format Slide Slide Show Tools Window Help
SimpleScreenRecorder
Recording
Pause recording
Enable recording hotkey
Enable sound notifications
Hotkey: Ctrl + Shift + Alt + Super + R
Information
Total time: 0:00:00
FPS in: 0.00
FPS out: 0.00
Size in: 1920x1080
Size out: 1920x1080
File name: os8-4...1.mkv
File size: 0 B
Bit rate: 0 bit/s
Preview
Preview frame rate: 10
Note: Previewing requires extra CPU time (especially at high frame rates).
Start preview
Log
[PulseAudioInput::InputThread] Stream is not a monitor.
[PageRecord::StartInput] Started input.
[PulseAudioInput::InputThread] Input thread started.
[FastResampler::Resample] Resample ratio is 1.0000 (was 0.0000).
Cancel recording
Save recording
Fragmentation
External Fragmentation – total memory space exists to satisfy a request, but it is not contiguous
Internal Fragmentation – allocated memory may be slightly larger than requested memory; this size difference is memory internal to a partition, but not being used
First fit analysis reveals that given N blocks allocated, 0.5 N blocks lost to fragmentation
1/3 may be unusable -> 50-percent rule
Operating System Concepts – 9th Edition
8.25
Silberschatz, Galvin and Gagne ©2013
Find
Find All
Match Case
Slide 25 of 71
Default
English (USA)

Fragmentation

- **External Fragmentation** – total memory space exists to satisfy a request, but it is not contiguous
- **Internal Fragmentation** – allocated memory may be slightly larger than requested memory; this size difference is memory internal to a partition, but not being used
- First fit analysis reveals that given *N* blocks allocated, 0.5 *N* blocks lost to fragmentation
  - 1/3 may be unusable -> **50-percent rule**

Segmentation

- Memory-management scheme that supports user view of memory
- A program is a collection of segments
  - A segment is a logical unit such as:
    - main program
    - procedure
    - function
    - method
    - object
    - local variables, global variables
    - common block
    - stack
    - symbol table
    - arrays

Segmentation Architecture

- Logical address consists of a two tuple:

  <segment-number, offset>,

- **Segment table** – maps two-dimensional physical addresses; each table entry has:
  - **base** – contains the starting physical address where the segments reside in memory
  - **limit** – specifies the length of the segment
- **Segment-table base register (STBR)** points to the segment table 's location in memory
- **Segment-table length register (STLR)** indicates number of segments used by a program;

  segment number ***s*** is legal if ***s*** < **STLR**

Segmentation Architecture (Cont.)

- Protection
  - With each entry in segment table associate:
    - validation bit = 0 ⇒ illegal segment
    - read/write/execute privileges
- Protection bits associated with segments; code sharing occurs at segment level
- Since segments vary in length, memory allocation is a dynamic storage-allocation problem
- A segmentation example is shown in the following diagram