

**School of Computing
National University of Singapore**

CS5245 Vision and Graphics for Special Effects

Lab 1: Compositing with After Effects CS4 and Keylight

Objectives:

- Learn to use Adobe After Effects CS4 and Keylight for compositing.
- Learn various useful features supported by After Effects CS4 and Keylight.

Notations:

- **Bold Face** for After Effects operations.
- Underline for file or object names.

Preparation:

1. Copy test footages.
Create a working folder in drive D. Download the test footages compositing-test1.zip and compositing-test2.zip from www.comp.nus.edu.sg/~cs5245/assignment.html into your working folder.
2. Unzip the zip files. The file compositing-test1.zip contains four images:
 - MerlinBlueFG.tif, MerlinBlueBG.tif, ExecFG.tif, ExecBG.tif.The file compositing-test2.zip contains image sequences in two sub-folders:
 - Girl0000.jpg to Girl0150.jpg in GirlSide sub-folder: foreground footage over blue screen.
 - T_bg0000.jpg to T_bg0150.jpg in TShipbg sub-folder: background footage
3. Run After Effects CS4.
After Effects CS4 may take a while to check with the license server before starting up. So, be patient.

Part 1: Learning to Use Keylight: Keying and Spill Removal

1. Create new project
By default, a new project window is automatically opened when After Effects has started up. You can also use **File** → **New** → **New Project** to create a new project.
2. Import images
 - Use **File** → **Import** → **Multiple Files** to import MerlinBlueFG.tif and MerlinBlueBG.tif. Click **Done** to close the window after importing.
3. Create new composition
 - You can create a new composition using **Composition** → **New Composition**. In this case, you may need to set the image size, duration, and other parameters according to the input footages.
 - Another more convenient method is to first select the foreground footage in the **Project** window by clicking on it, and then choose **File** → **New Comp from Selection**. The foreground footage is automatically included into the new composition.

- You may change the name of the new composition as follows. Select the composition, click right mouse button, select **Rename**, enter a new name, say, comp1, and click **OK**.
 - Select and drag the background footage to the **Timeline** window and place it below the foreground footage.
4. Perform keying with Keylight
 - Select the foreground footage in the timeline. Then, select **Effect** → **Keying** → **Keylight**.
 - Set **Screen Colour** by using the dropper to select a color in the blue screen background away from the hair.
 5. Improve background using **Screen Gain** and **Screen Balance**
 - Increase **Screen Gain** to about 105. This will make the foreground transparent and thus clean up the background.
 - Decrease **Screen Balance** to about 0. This step is a bit subjective but improves the blue spill a little.
 6. Remove blue spill
 - Turn off **Lock Biases Together**.
 - Set **Despill Bias** by using the dropper to select a skin color.
 - The final comp should have no blue spill now, like the following:



7. Save project
 - Select **File** → **Save** to save your project.

Part 2: Learning to Use Keylight: Keying and Transparency

1. Create new project and new comp
 - Repeat Steps 1 to 3 of Part 1, but this time, import ExecFG.tif and ExecBG.tif.
2. Perform keying with Keylight
 - Select the foreground footage in the timeline. Then, select **Effect** → **Keying** → **Keylight**.
 - Set the **Screen Colour** to a color in the dark green screen background.
 - The foreground looks transparent also because the green screen is actually more red than green, and the foreground also has a prominent red component!
3. Fix problem due to bad screen

- To fix the problem, we need to tell Keylight to scale down the red component so that the green component becomes the prominent component.
 - Turn on **Lock Biases Together**.
 - Set **Despill Bias** to the color of the pilot's face mask. To do this, you will need to first switch the view to **Source**. After setting **Despill Bias**, you can switch the view back to **Final Result** to examine the comp.
4. Improve transparency
 - Switch the view to **Status**.
 - You will see that the cockpit's glass canopy is not very transparent while the pilot is not totally opaque.
 - Increase **Clip Black** to about 20 to make the glass more transparent so that the background can show through.
 - Decrease **Clip White** to about 70 to make the pilot more opaque.
 5. Remove spots in foreground and background
 - There are some spots in the foreground and background.
 - Increase **Screen Despot Black** and **Screen Despot White** to about 2.
 - The resulting comp should look ok now, like the following:



6. Save project.

Part 3: Compositing Exercise (to be graded)

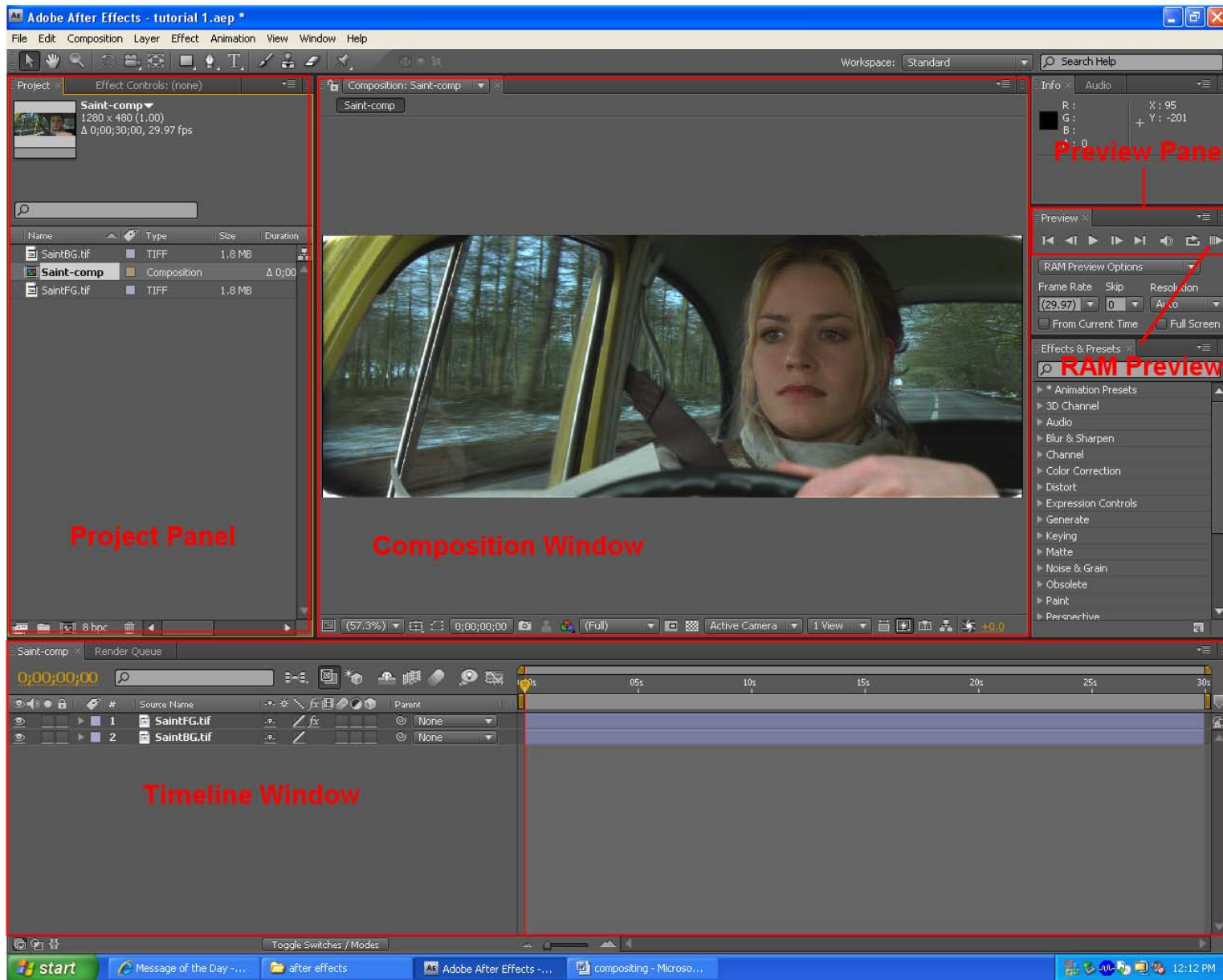
1. Create a new comp and import footages.
 - Use **File** → **Import** → **Multiple Files** to import all the files in GirlSide sub-folder. In the **Import Multiple Files** window, select all the foreground images, click on the **JPEG Sequence** box and then click **Open**. Import all the files in TShipbg sub-folder in the same way.
2. Perform keying with Keylight.
3. Remove blue spill using **Despill Bias**.
4. Improve transparency of the gauze, but make sure that the hands and legs are opaque. Reduce fringes around the foreground. Use **Screen Gain**, **Screen Balance**, **Clip Black**, **Clip White**, and **Screen Shrink** appropriately.
5. Generate comp video and save project.

Notes:

1. At any time, you can preview your comp as follows:
 - Use the **Preview** panel to check whether the settings are ok for every frame. Make further adjustments if necessary.
 - By clicking the **Frame Forward** or **Frame Reverse** button, you can forward or reverse the comp one frame at a time.
 - By sliding the **Time Indicator** button, you can quickly go through each frame to see whether they are ok. This procedure is called “scrubbing the video”.
 - If your computer is not fast enough or does not have enough memory, you can set the comp resolution to **Half**, **Third**, or **Quarter**. Resolution setting is located at the bottom of the **Composition** window.
 - You can also click the **Run** button to see the rendered composition. To stop, click the **Run** button or anywhere in the **Preview** panel or **Composition** window.
 - To see how the rendered composition looks like in real-time, click the **RAM Preview** button. After Effects will render the comp in RAM and then show the video in real-time. Rendering the comp in **Full** resolution can take some time. To stop, click anywhere in the **Preview** panel or **Composition** window.
 - If your computer is not fast enough or does not have enough memory, you can set the comp resolution to **Half**, **1/4**, or **1/8** by clicking the **Proxy** button.

2. To generate the comp video, do the following:
 - Set the comp resolution of After Effects to **FULL**.
 - Select **Comp** → **Make Movie...**. Enter a file name for the comp movie. Then, click the **Render** button. Keylight performs a lot of computation. So, comp rendering can take several minutes.

After Effect: Main Window and Panels



After Effects: Effect Control Panel for Keylight

