

NUS School of Computing

AY 2011/12 Semester 2

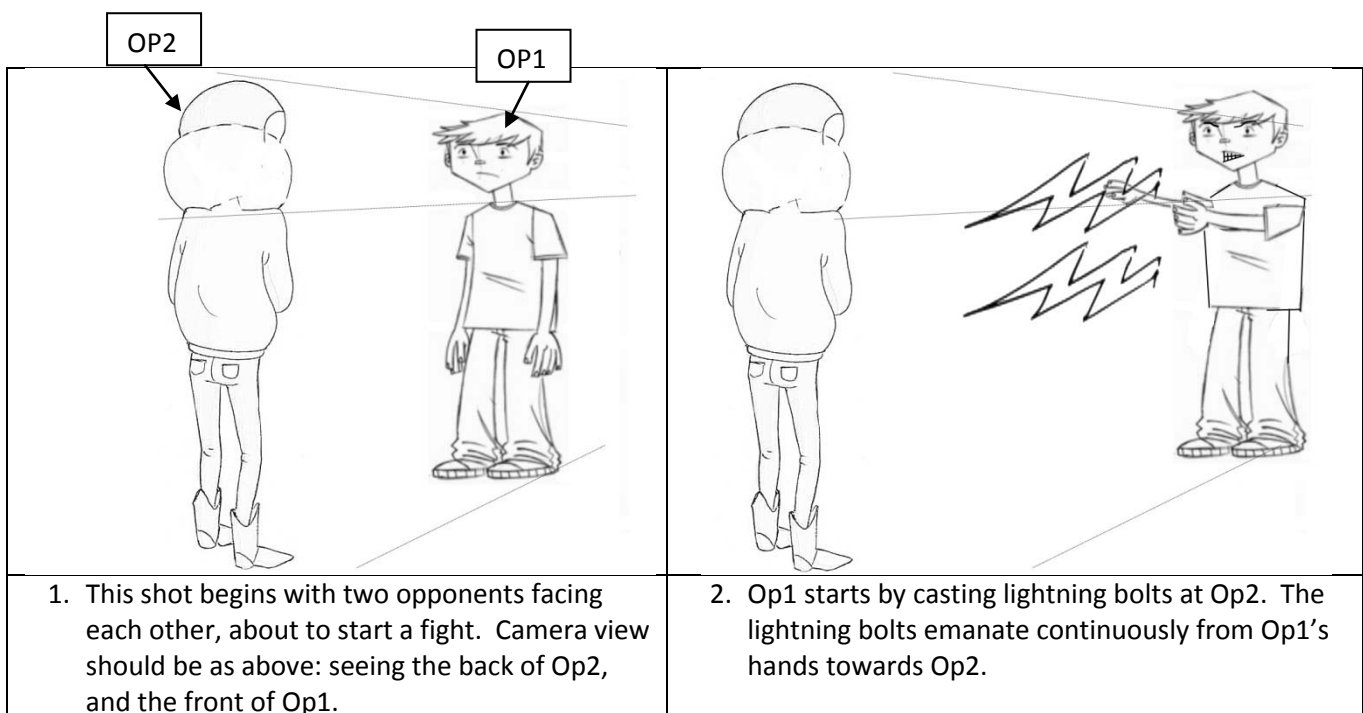
CS4340 Digital Special Effects: Final Project

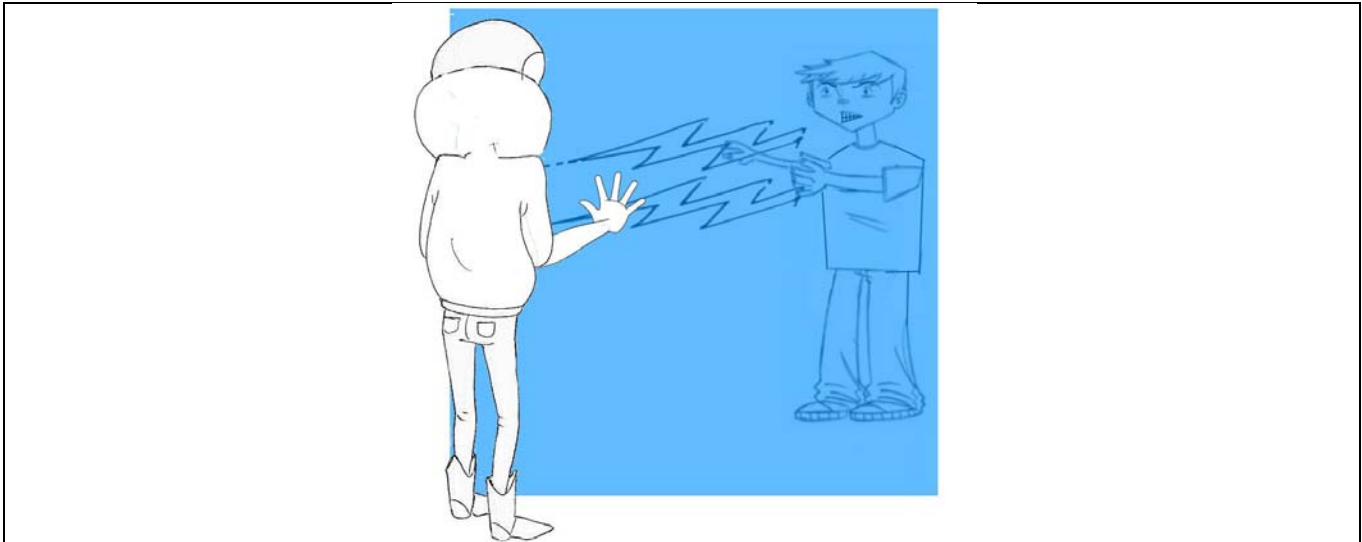
Unlike in previous semesters, the Final Project in this semester will be more focused, and yet still allow for creativity. Please read through this document, and plan ahead with your teammates. Use the IVLE Forum to ask questions (so that other students will benefit; they are likely to have the same questions as you), or to give suggestions.

In this Final Project, you are to produce the video containing the visual effects as depicted in the storyboard below. The main effect is that of the lightning bolts and shield, similar to the effect in “Fighter Fought” <http://www.comp.nus.edu.sg/~cs4340/project-2011/grp2/grp2-effect.mp4> . Your video should begin with a title page (a simple blank page showing your name will suffice) and immediately cut to Panel 1 of the storyboard. No further preamble is required or necessary. The focus of this Final Project is in the visual effects, not in the plot of the story. There is therefore no need to situate the visual effects in a coherent and logical storyline.

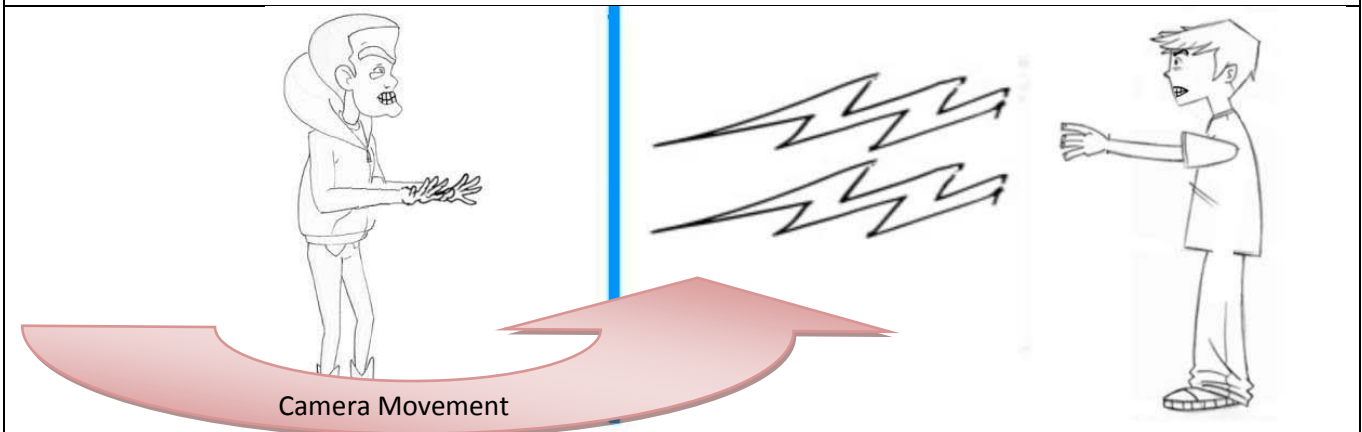
Your video should depict all the key characters, actions, and effects in the storyboard. Panels 1 through 9 should occupy at least 15 seconds in your video. After Panel 9, you may further extend the video for at least another 10 seconds, but not more than 30 seconds, with additional actions and visual effects as your creativity guides you. For instance, you may introduce a superhero with special powers to intervene and save Op2. Or let Op2 disintegrate into ashes as he is hit by the lightning bolts. Let your imagination fly here, as you will be awarded marks for your creativity.

Storyboard

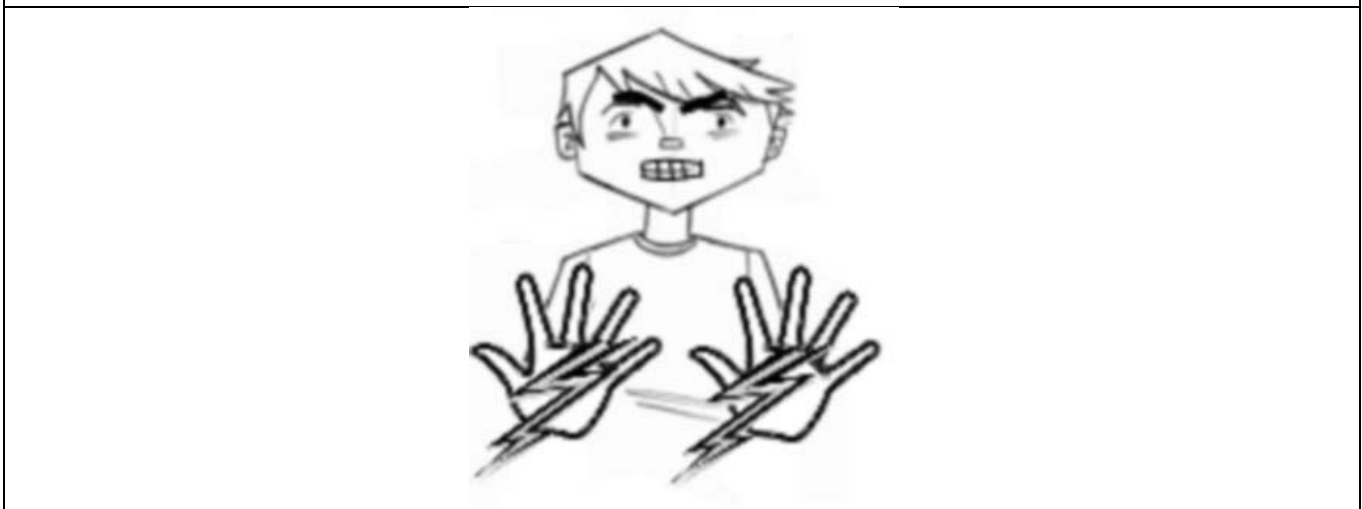




3. Instinctively, Op2 protects himself from the lightning bolts by creating a planar protective shield. The bolts strike the shield and cause sparks, but do not reach Op2. Because the shield is blue and large (large enough to get between the camera and Op1), Op1 appears bluish from the camera view.



4. While the opponents are fighting, camera dollies around to a wide shot showing the side view of both opponents. The fighting action does not stop as the camera dollies, i.e. this is not “bullet time”. The lightning bolts continue to attack Op2 as the camera moves. Op1 no longer appears bluish in this view because he is no longer behind the shield (from the camera’s perspective).



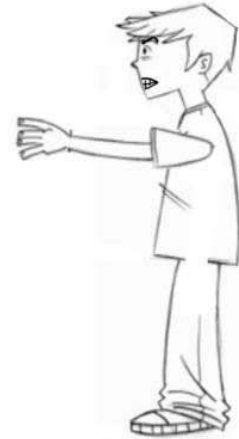
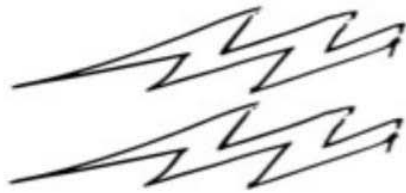
5. Close up shot of Op1, showing his intense facial expression. Lightning bolts emanate from his hands.



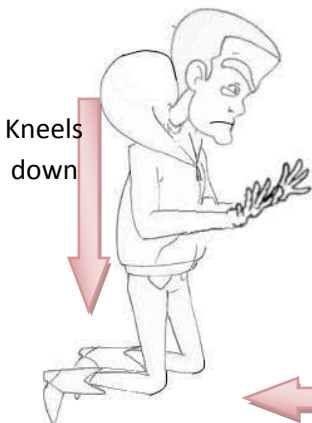
6. Close up shot of Op2, who appears bluish because he is behind the shield. Lightning bolts hit the shield and cause sparks, which light up Op2's face, hands, and body accordingly.



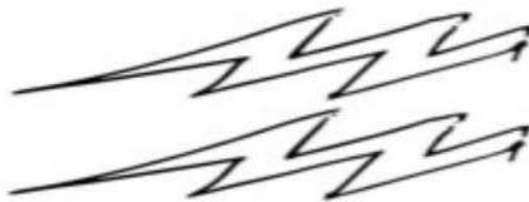
Head bends
down



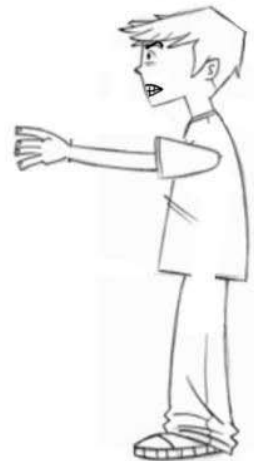
7. Op2 starts to weaken.



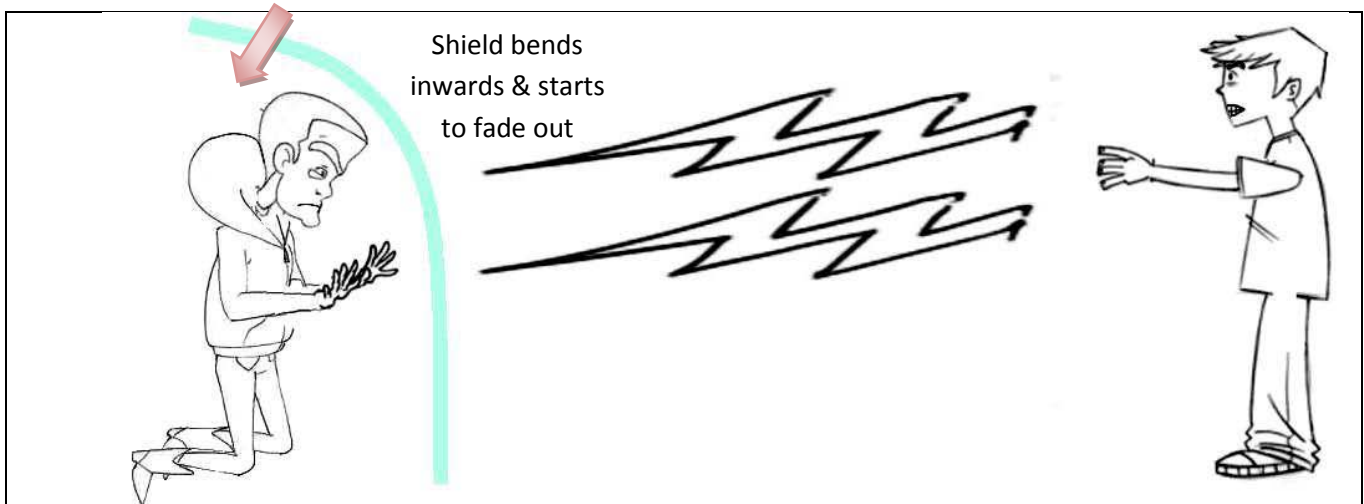
Kneels
down



Shield moves to
the left



8. Op2 kneels down. The shield moves closer to Op2, and become less blue, indicating a weaker shield.



9. The protective shield bends towards Op2 as Op2 weakens.

10. Introduce a new shot and continue the story for another 10 to 30 seconds. Use your creativity to create additional visual effects.

Tasks

- Shoot the raw footages as a group. You need to act out the characters of Op1 and Op2, and adhere to the camera views and movements shown in Panels 1 to 9 as much as possible. Dialogue, if used, should be kept to a minimum.
- Individually, each member of the group will create the lightning bolts and shield. That is, each individual will be assessed on his/her creation of the visual effects depicted in the storyboard.
- Now choose one of these individual effects video and extend it as a group project. Start with a new camera shot for Panel 10, and continue the story as your group decides.
- Submit a Project Proposal for your video extension. This Proposal should contain the following
 - Your group's name and members' names.
 - A one-line description of the effect to be achieved, e.g. "Human disintegrating into ashes under lightning bolts", if you decide to let Op2 die.
 - A synopsis: in one paragraph, elaborate on the effect. Describe its novelty. It is best to do one major effect rather than many small ones.
 - Production notes: describe the visual elements needed to achieve the effect; describe how to create the visual elements, and how these are combined together to achieve the effect.
 - Roles of each group member: distribute the tasks evenly among all members of your group, and say who is to do what.
 - Production schedule: using a table or timeline, describe the tasks in pre-production (e.g. making or acquiring a miniature, or other props), production (where and when to shoot the raw footages, including footage for the "Making of" video), and post-production (e.g. compositing, CG modeling and animation).
- Submit a Progress Update. This is a concise summary of the work done to date, the problems encountered and how you intend to overcome them. Also include a schedule for the remaining work to be done. If your effects deviated significantly from the original one stated in your Proposal, then submit a new storyboard and synopsis as well. Along with this, submit any raw footages you have captured, or partially edited videos, to demonstrate your progress.

- Also produce a “Making of” video (no more than 3 minutes long) that explains the key steps in creating your video extension. You could narrate the steps, or use subtitles, or both. But at least one of these must be present. If you show screen recordings of how you used, say, After Effects, to create your effect, please speed up these screen shots lest it gets boring to watch. With careful planning, you can overlap your shooting of raw footages for both the effects and “Making of” video during production so as to save time.

May's and May-not's

May's	May-not's
You need not dress Op1 and Op2 exactly as shown in the storyboard. Dress them any way you choose, as long as it is decent.	You may not substitute Op1 or Op2 with CG characters or miniatures. They must be real human actors.
You may situate the entire scene outdoors or indoors.	You may not replace the rectangular planar shield with a 3D dome-shaped shield. However, you may make the shield circular, hexagonal, or any other 2D shape as long as it is planar.
Feel free to change the hand gestures of Op1 when delivering the lightning bolts. The bolts may emanate from the fingers of Op1 instead of the hands. Similarly, when Op2 creates the protective shield, you may replace his open palm gesture with, say, arms held up in an “X” formation, with clenched fists.	Don't replace the lightning bolts with laser beams or fire or “balls of energy”. Keep them as lightning bolts: irregular and jagged.
Feel free to change the color of the shield, as long as it is distinct from the background, and clearly visible as a shield.	Don't make the shield opaque. It should be transparent or translucent, so that objects behind the shield are visible.
Likewise, the lightning bolts need not be the usual white. Choose your own color, but keep it distinct from the background, and from the shield.	Don't depict excessive violence, or blood and gore in your video. Avoid sexual content or themes, racist, vulgar or other objectionable material. Don't use your video to make political or religious statements.
You may change Op2's behavior as he weakens: e.g. he may fall down instead of kneel down. But the shield should move closer to him and lose color.	
Audio is optional, but adding it will likely impress the judges during the competition. Having, or not having, audio will not affect your grade.	

Grading Criteria and Competition

Your project will be judged according to these criteria:

- Realism in the visual effects, including secondary effects, such as illumination on nearby objects caused by the bolts or shield.
- Creativity: Camera work (shot types, camera movements), Novelty
- Technical difficulty in creating the effects.

All group videos will automatically be entered into a competition for the Best VFX Award. A panel of judges will decide using their own criteria (unfortunately, these criteria are not known in advance). A prize will be given to the winning group. However, this competition has no bearing on your academic grade.

Submission and Deadlines

	Item	Deadline	Remarks
Each group	Project Proposal	Sunday, 4 Mar., 23:59 hrs	Name your file <group_name>-proposal.pdf. Use only PDF format.
Each group	Progress Update	Sunday, 25 Mar, 23:59 hrs	Name your file <group_name>-update.zip. In this zip file, include a PDF file describing your progress, as well as any videos to demonstrate your progress.
Each individual	Effects video for Panels 1 to 9 of the storyboard.	Sunday, 8 Apr., 23:59 hrs	Name your file <your_name>.mpg.
Each group	Effects video containing Panels 1 to 9, plus your extension video.	Sunday, 8 Apr., 23:59 hrs	Name your file <group_name>-effects.mpg.
Each group	"Making of" video	Sunday, 15 Apr., 23:59 hrs	Name your file <group_name>-making-of.mpg.

Remarks:

- Submit your files via IVLE into the appropriate Workbin folder.
- Please use ONLY these file formats: MPEG2, MPEG4, DIVX, Apple QuickTime MOV
- IVLE limits each file to 200Mb. If you really can't keep to this limit, then put your video in Dropbox and provide the link.
- Use a consistent aspect ratio throughout your video capture, editing, and final comp to avoid distorting the scene or characters.
- Try to use high definition, e.g. 720p. The lowest acceptable resolution is VGA: 640x480.