Digital lighting design study

Preliminary questionnaire

0.1. Please rate your experience with 3D computer graphics.

    (1)   No experience
    (2)   Have tinkered with it
    (3)   Have worked on a project
    (4)   Have worked on more than one project
    (5)   Work as professional

0.2. Please rate your experience with lighting design in 3D computer graphics.

    (1)   No experience
    (2)   Have tinkered with it
    (3)   Have worked on a project
    (4)   Have worked on more than one project
    (5)   Work as professional

0.3. Please rate your experience with real world lighting design.

    (1)   No experience
    (2)   Have tinkered with it
    (3)   Have worked on a project
    (4)   Have worked on more than one project
    (5)   Work as professional

Experiment 1:
Key light matching

Please mark your choice in both tables after each trial.

1.1. Please rate the accuracy of your match of the target image.

Direct lighting Cartoon scene	**Indirect lighting** Cartoon scene	**Direct lighting** Architectural scene	**Indirect lighting** Architectural scene
1 (best) 2 3 4 5 (worst)	1 (best) 2 3 4 5 (worst)	1 (best) 2 3 4 5 (worst)	1 (best) 2 3 4 5 (worst)

Please comment on your rating. Why were you satisfied with some results more than with others?

1.2. Please rate each trial difficulty.

Direct lighting Cartoon scene	**Indirect lighting** Cartoon scene	**Direct lighting** Architectural scene	**Indirect lighting** Architectural scene
1 (hard) 2 3 4 5 (easy)	1 (hard) 2 3 4 5 (easy)	1 (hard) 2 3 4 5 (easy)	1 (hard) 2 3 4 5 (easy)

Please comment on your rating. Why do you find some trials harder and some easier?

Questions to answer after 4th trial follow on next page.

Please answer these questions after the 4th trial.

1.3. Please describe the workflow you have used to match the target image.

1.4. Did your workflow differ when using indirect lighting (compared to direct lighting)? Please describe how.

1.5. Which specific image features were you trying to match? Did the visibility of these features differ in some trials? Was it dependent on the use of direct/indirect lighting? Please describe how.

Experiment 2:
Fill light matching

Please mark your choice in both tables after each trial.

2.1. Please rate the accuracy of your match of the target image.

Direct lighting Cartoon scene	Indirect lighting Cartoon scene	Direct lighting Architectural scene	Indirect lighting Architectural scene
1 (best) 2 3 4 5 (worst)	1 (best) 2 3 4 5 (worst)	1 (best) 2 3 4 5 (worst)	1 (best) 2 3 4 5 (worst)

Please comment on your rating. Why were you satisfied with some results more than with others?

2.2. Please rate each trial difficulty.

Direct lighting Cartoon scene	Indirect lighting Cartoon scene	Direct lighting Architectural scene	Indirect lighting Architectural scene
1 (hard) 2 3 4 5 (easy)	1 (hard) 2 3 4 5 (easy)	1 (hard) 2 3 4 5 (easy)	1 (hard) 2 3 4 5 (easy)

Please comment on your rating. Why do you find some trials harder and some easier?

Questions to answer after 4th trial follow on next page.

Please answer these questions after the 4th trial.

2.3. Please describe the workflow you have used to match the target image.

2.4. Did your workflow differ when using indirect lighting (compared to direct lighting)? Please describe how.

2.5. Which specific image features were you trying to match? Did the visibility of these features differ in some trials? Was it dependent on the use of direct/indirect lighting? Please describe how.

Experiment 3:
Indirect light matching

Please mark your choice in both tables after each trial.

3.1. Please rate the accuracy of your match of the target image.

Cartoon scene	Architectural scene
1 (best) 2 3 4 5 (worst)	1 (best) 2 3 4 5 (worst)

Please comment on your rating. Why were you satisfied with some results more than with others?

3.2. Please rate each trial difficulty.

Indirect lighting Cartoon scene	Indirect lighting Architectural scene
1 (hard) 2 3 4 5 (easy)	1 (hard) 2 3 4 5 (easy)

Please comment on your rating. Why do you find some trials harder and some easier?

Questions to answer after 2nd trial follow on next page.

Please answer these questions after the 2nd trial.

2.3. Please describe the workflow you have used to match the target image.

3.4. Did your workflow differ in this experiment from the workflow in previous experiments (key lights, fill lights)? Please describe how.

3.5. Which specific image features were you trying to match? Did the visibility of these features differ in some trials?

Experiment 4: Lighting transfer

Please mark your choice in both tables after each trial.

4.1. Please rate, how satisfied you were with the result of each trial.

Direct lighting with small lights Cartoon scene	**Direct lighting with large lights** Cartoon scene	**Indirect lighting** Cartoon scene	**Direct lighting with small lights** Architectural sc.	**Direct lighting with large lights** Architectural sc.	**Indirect lighting** Architectural sc.
1 (not satisfied) 2 3 4 5 (very satisfied)	1 (not satisfied) 2 3 4 5 (very satisfied)	1 (not satisfied) 2 3 4 5 (very satisfied)	1 (not satisfied) 2 3 4 5 (very satisfied)	1 (not satisfied) 2 3 4 5 (very satisfied)	1 (not satisfied) 2 3 4 5 (very satisfied)

Please comment on your rating. Why were you more satisfied with result of some experiments?

4.2. Please rate the difficulty of each trial.

Direct lighting with small lights Cartoon scene	**Direct lighting with large lights** Cartoon scene	**Indirect lighting** Cartoon scene	**Direct lighting with small lights** Architectural sc.	**Direct lighting with large lights** Architectural sc.	**Indirect lighting** Architectural sc.
1 (hard) 2 3 4 5 (easy)	1 (hard) 2 3 4 5 (easy)	1 (hard) 2 3 4 5 (easy)	1 (hard) 2 3 4 5 (easy)	1 (hard) 2 3 4 5 (easy)	1 (hard) 2 3 4 5 (easy)

Please comment on your rating. Why do you find some experiments harder and some easier?

4.3. Please rate, to what degree did you feel restricted by the available lighting features.

Direct lighting with small lights Cartoon scene	**Direct lighting with large lights** Cartoon scene	**Indirect lighting** Cartoon scene	**Direct lighting with small lights** Architectural sc.	**Direct lighting with large lights** Architectural sc.	**Indirect lighting** Architectural sc.
1 (very) 2 3 4 5 (not at all)	1 (very) 2 3 4 5 (not at all)	1 (very) 2 3 4 5 (not at all)	1 (very) 2 3 4 5 (not at all)	1 (very) 2 3 4 5 (not at all)	1 (very) 2 3 4 5 (not at all)

Please comment on your rating. Why did you feel more restricted in some experiments?

Please answer following questions after the 6th trial.

4.4. Please describe the workflow you have used to transfer the lighting from the target image.

4.5. Did your workflow differ when using indirect lighting (compared to direct lighting)? Please describe how.

Experiment 5.
Free lighting design

5.1. Please rate the usefulness of following lighting model features.

	Still life scene	Office scene
Arbitrary size key lights	1 (totally useless) 2 3 4 5 (essential)	1 (totally useless) 2 3 4 5 (essential)
Fill lights (lights that do not cast shadows/create highlights)	1 (totally useless) 2 3 4 5 (essential)	1 (totally useless) 2 3 4 5 (essential)
Indirect lighting	1 (totally useless) 2 3 4 5 (essential)	1 (totally useless) 2 3 4 5 (essential)

Please answer following questions after finishing both trials.

5.2. If forced to choose, how would you rank the features above based on usefulness?

1. most useful _____

2. most useful _____

3. most useful _____

Please comment on your rating/ranking.

5.3. Why did you decide to use/not use <u>indirect lighting</u> in your design?

5.4. Why did you decide to use/not use <u>fill lights</u> in your design?

5.5. Did you feel restricted by the lighting tools (options) you had available during the lighting design? If so, how exactly?