

QUY ĐỊNH VỀ TRÌNH BÀY KHÓA LUẬN TỐT NGHIỆP
(Dành cho sinh viên chương trình đào tạo đạt chuẩn quốc tế)

Phụ lục 01: Mẫu trang bìa KLTN

VIETNAM NATIONAL UNIVERSITY, HANOI
UNIVERSITY OF ENGINEERING AND TECHNOLOGY

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HA NOI - 20*<the last two numbers of the defense year >*

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Phu luc 02: Mẫu trang phụ bìa KLTN

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Supervisor:*(Lower case, bold, 14pt)*

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“I hereby declare that the work contained in this thesis is of my own and has not been previously submitted for a degree or diploma at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no materials previously published or written by another person except where due reference or acknowledgement is made.”

Signature:.....

SUPERVISOR'S APPROVAL

“I hereby approve that the thesis in its current form is ready for committee examination as a requirement for the Bachelor of Computer Science degree at the University of Engineering and Technology.”

Signature:.....

ACKNOWLEDGEMENT

[This is the page wherein the student acknowledges the assistance of all persons/organizations during the time you conduct your thesis work. The name of the person/organization and the actual task that the student got help from should be mentioned]

Some guidelines:

I would like to express my sincere gratitude to ... (should be your supervisors)

I am grateful to ... (should be your tutor)

I would like to also thank ... (should be your colleagues, friends who have helped you along)

I greatly appreciate the following organizations... (the Department/Lab where you did your thesis work, the University of Engineering and Technology, companies involved, ...)

This thesis was partly supported by the [e.g., Vietnam National University Hanoi] under the project XYZ.

ABSTRACT

[This is the page tell the reader in 1 or maximum 2 pages the content of the whole thesis.]

Guidelines: The abstract should contain the following points

1. Context of the thesis
2. The problem investigated
3. Thesis motivation: what you want to solve in the problem (Point 2) and what else do you want to do (new perspective)? What are your ideas? Why do you want to solve them?
4. The methodology: To solve the problem (or to extend the new work), what approach you want to do? Is this approach technically sound?
5. The methods taken: following the chosen methodology (Point 4), you will need to select some particular methods (data, algorithm, design, simulation...). Describe briefly these methods and their essential/important main parameters.
6. Results: inform the results due to the application of the methods in Point 5. If there are many results, only give maximum 3 most important results in the ABSTRACT.
7. Your conclusions about the results: interpretation of the results, their impacts with respect to the problem under investigation (Point 2) and with respect to the broader context (Point 1)

*Note that the main part of the thesis (from the ABSTRACT until the BIOBLIOGRAPHY) is strictly **technical** and forms a **complete** technical document (a problem is stated, and the solution is made for only that stated problem), therefore you should use only a “**neutral**” tone in the main part. If you want to give some personal information, you should create a page “PREFACE” before the ABSTRACT page. For example if you want to say that due to the difficulty of time, you cannot finish some tasks ... though you meant to do them, put this information in the PREFACE.*

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ABBREVIATIONS

GSA	Graduate Student Association
BLT	Bacon, Lettuce, and Tomato (Sandwich)
BYOB	Bring Your Own Beverage
WWE	World Wrestling Entertainment
FTW	For the Win

INTRODUCTION

1.1. Motivation

From current advances in technologies for image/video acquisition and processing, time synchronized video systems are built for applications such as interactive 3-D TV and free-viewpoint TV. These systems use multiple cameras to capture scene simultaneously.

In the technical aspect, they can be considered as an extension of the traditional stereo vision systems. From the application viewpoint, they provide life-like experiences to viewers. Let us consider two examples. The first one is interactive 3-D TV concept which can be implemented based on depth images-based rendering (DIBR) methods. This approach combines color images and synchronized depth information to synthesize new views.

There are two direct advantages. First, it is compatible with available 2-D TV. Second, it allows the end users to adjust perceived depth information finely. The second one is free-viewpoint TV which allows the viewpoint of users to be changed freely. The intermediate views are interpolated based on depth information and fixed viewpoints. They are two of

various applications that we want to show, in which extracting accurate depth information from multiple synchronized video streams is a key step.

1.1.1. [Section Title]

[Section text]

1.1.1.1. [Sub-Section Title]

[Sub-Section text]

Example

The methods section should include a description of the apparatus or equipment used, and a description of the process or procedures followed in chronological order. This section should include enough detail so that another researcher could duplicate the experiments (graphs, diagrams, or spreadsheets should be included). Also include any calculations used to conduct the experiments.

Give a full description of the method used to complete each lab. Insert figures, tables, etc. AFTER they are mentioned in the text, and be sure to mention every figure/table/etc. in the text. Number all figures, tables, and equations. Put captions under all figures and above all tables, and reference everything that comes from a book, website, or other source. Include an equipment and/or materials list and step-by-step instructions so that a peer could do each lab without your help. If detailed derivations, tutorials, etc. are needed, they can be included in appendices. Mention all appendices in the text. Avoid use of “I/we/you”.

When writing the methods section:

- 1) Describe equipment (part numbers and type/nature/functionality of equipment)

“A xxxx time domain reflectometer was used in this lab to measure the step function response of different types of cables and terminations.”

- 2) Describe the process (a step by step of the important actions)

“The TDR was connected to one end of a cable with a termination on the far end. The step function response was observed on the TDR screen and manually recorded/sketched.”

3) Describe/explain what parameters were measured

“A TDR measures the voltage step function response of a cable by sending a step function down the wire and reading the total (incident plus reflected) response at the input.”

4) Discuss potential sources of error (possibly yielding unexpected results, but also possible that it didn't cause any problems in this lab).

“The TDR has a limited rise time step, which clearly shows up in all of the measurements. The ideal response has an infinite rise time, but the TDR does not. This will reduce the precision to which lengths can be measured and may also result in difficulty in observing faults or other problems very near the TDR test point.”

1.2. Contributions and thesis overview

The purpose of this thesis is to propose an algorithm which allows to recover spatially and temporally consistent depth maps from synchronized video sequences. Our main contribution is the development of a comprehensive approach to solve the problem. First, the geometric coherence is realized to preserve spatial consistency by using the SIFT flow. Second, we propose an optical flow constraint to make the depth maps consistent in time.

The rest of this thesis is organized as follows.

Chapter 2 provides theoretical background, focusing on stereo vision via technical aspect. At first, standard stereo configuration and triangulation -based formula for computing disparity/depth information is established. We then summarize the challenges of stereo vision that must be solved. Since we formulate stereo/multi-view matching as an energy minimization problem, the Graph Cut method which can resolve this issue effectively is reviewed briefly.

In chapter 3, the problem is formulated in form of a global energy minimization framework. We incorporate two proposed constraints besides photo-consistency one and color segmentation information into the estimation process. With the concern of computational complexity, the so-called bundle optimization is exploited. Experiments are carried out with real dataset and experimental results are evaluated. The conclusions and directions for future work are addressed in the final section of the chapter.

RELATED WORK

2.1. Using Captions

For equations, using Equation Editor (MS word 2003) or Insert →Equation (MS word 2007-2010). To aligned equation and index of equation, using Table. Example:

$$f(x) = a_0 + \sum_{n=1}^{\infty} \left(a_n \cos \frac{n\pi x}{L} + b_n \sin \frac{n\pi x}{L} \right) \quad (2.10)$$

For Table:

Table 2.1 – Average day of a UETgraduate student.

Cups of Coffee	Hours in Lab	Productive Hours in Lab	Emails Received	Internet Videos Watched	Hours at Valhalla
3	10	3	56	12	2+

For Figure:



Figure 2-1 – UET Logo.

In case of many figures in one frame, using Table as example:



(a)



(b)

Figure 2-2–University of Engineering and Technology: (a) Logo of UET (b) Front view of UET Headquarter

2.2. Cross-References and Lists

When referring to an equation/figure/table in the text, use a cross-reference (“References” tab → “Captions” window → “Cross-reference”) to be sure that the numbering is always correct as you move things around. If you highlight this sentence, you will see the fields that reference, Figure 2-1, and For Table:

Table 2.1.Those references will always point to the correct equation/figure/table (Hint: this will potentially save you a TON of time in manual formatting).

To use a numbered list for procedures or other information which needs to be logically ordered, choose an empty line and select the “Numbered List” style:

1. Make a thesis template.
2. ???
3. Profit.

If you instead have information that is hierarchical but doesn't need specific ordering, use a bulleted list by choosing the “Bulleted List” style:

- Each
 - Level
 - Is
 - ◆ Individually

Chapter 3

THE METHOD

Chapter 4

RESULTS AND DISCUSSIONS

Chapter 5

CONCLUSIONS

5.1. Conclusions

5.2. Future Works

References

Examples:

- [1] ITU, "Internet protocol data communication service – IP packet transfer and availability performance parameters," ITU-T Recommendation Y.1540, Feb. 1999.
- [2] IEEE Reference Format [Online] <http://www.ieee.org/auinfo03.pdf>
- [3] B. Callaghan, *Voices from the Margins: Postmodernism and Latin American Fiction*, Master thesis, University College Cork, 1994.
- [4] H. Schimanski and C. Thanner, "Raiders of the lost ark," *IEEE Trans. Electromagn. Compat.*, vol. 51, no. 5, pp. 543–547, May 2003.
- [5] J. Matula and R. Franck, "A case for two," in *Proc. 15th Int. Zurich Symp. and Technical Exhibition on Electromagnetic Compatibility*, Zurich, Switzerland, Feb. 2003, vol. 1, pp. 347–350.

Note: IEEE Format regulations for several different types of references

Standards:

- [6] ITU, "Internet protocol data communication service – IP packet transfer and availability performance parameters," ITU-T Recommendation Y.1540, Feb. 1999.

Online:

- [7] IEEE Reference Format [Online] <http://www.ieee.org/auinfo03.pdf>

Thesis:

- [8] B. Callaghan, *Voices from the Margins: Postmodernism and Latin American Fiction*, Master thesis, University College Cork, 1994.

Journal articles:

- [9] H. Schimanski and C. Thanner, "Raiders of the lost ark," *IEEE Trans. Electromagn. Compat.*, vol. 51, no. 5, pp. 543–547, May 2003.

Conference papers:

- [10] J. Matula and R. Franck, "A case for two," in *Proc. 15th Int. Zurich Symp. and Technical Exhibition on Electromagnetic Compatibility*, Zurich, Switzerland, Feb. 2003, vol. 1, pp. 347–350.

Books:

- [11] F.T. Ulaby, *Fundamentals of Applied Electromagnetics*, 2nd edn., Prentice Hall, 2004

Appendix A