Hebei University of Technology Template of Dissertation/Thesis for International Students

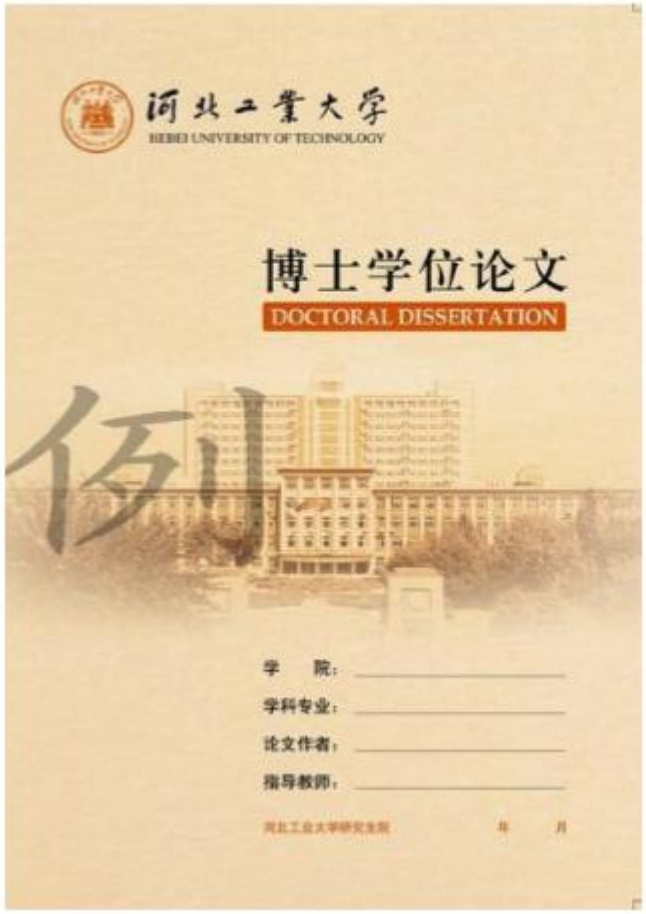
School of International Education
Graduate School

河北工業大学
HEBEI UNIVERSITY OF TECHNOLOGY

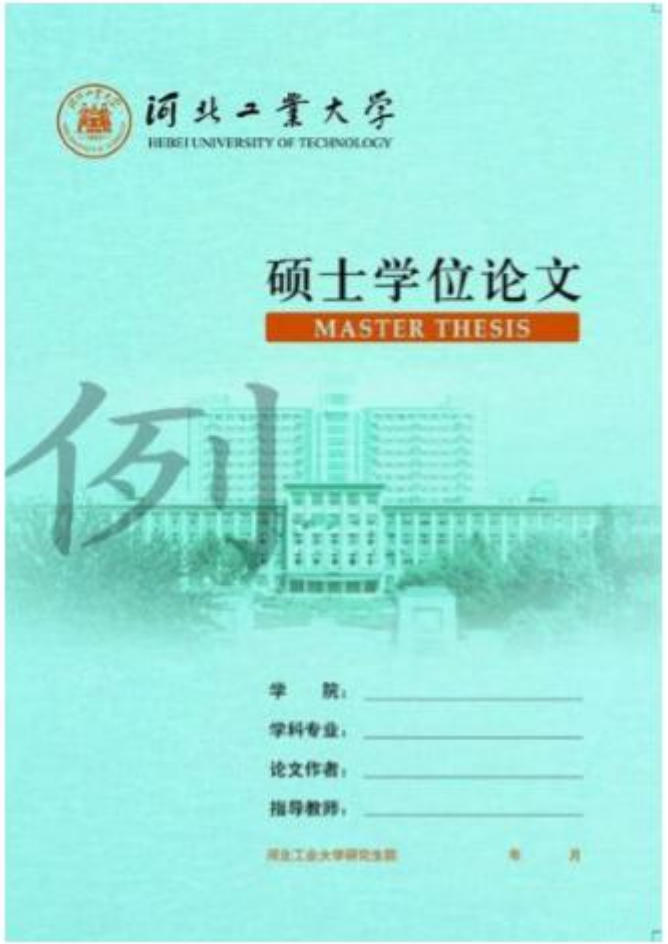
Writing Format

- Font size for all the chapter titles, including the abstract, list of figures, list of tables, references, achievements and acknowledgements is 18, with one row spacing before and after the chapter title.
- Titles such as 1.1 should be size 16. Before and after this title paragraph there should be 12 pounds.
- Titles such as 1.1.1 should be size 14 bold, and line space 1.25 times. Before and after this title paragraph there should be 6 pounds.
- Titles such as 1.1.1.1 should be size 12, and line space 1.25 times. Before and after this title paragraph there should be 6 pounds.
- All contents besides title should be size 12, with line space 1.25 times .
- There should be two characters between every serial number and the title, including tables and figures.

Cover



For PhD



For Master

Contents

- For the table of contents, it should indent 4 characters for each level of title. Also, there should be 2 characters between the serial number and the title content, e.g.

Also, it needs to be emphasized that table of contents start with “Chapter 1 Introduction” . Things such as abstract and list of figures can’t be listed.

The page number should be like what is shown on the right side.

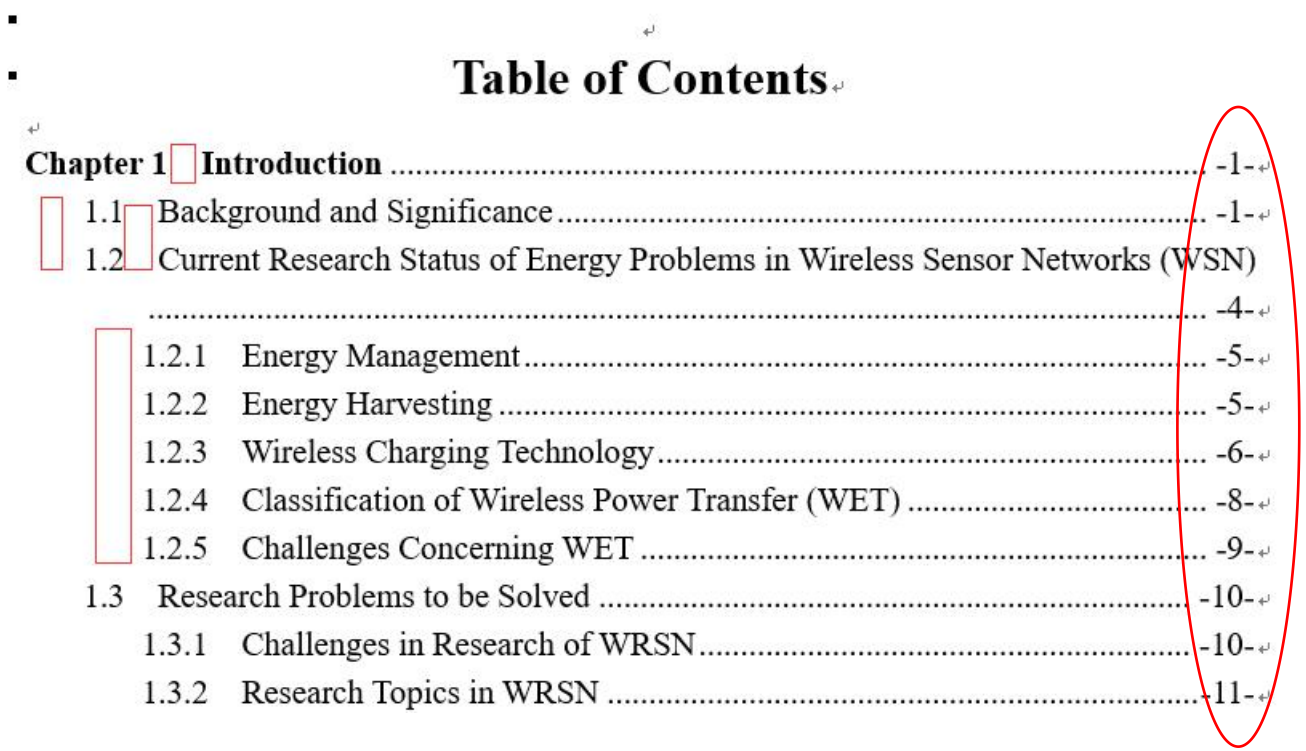
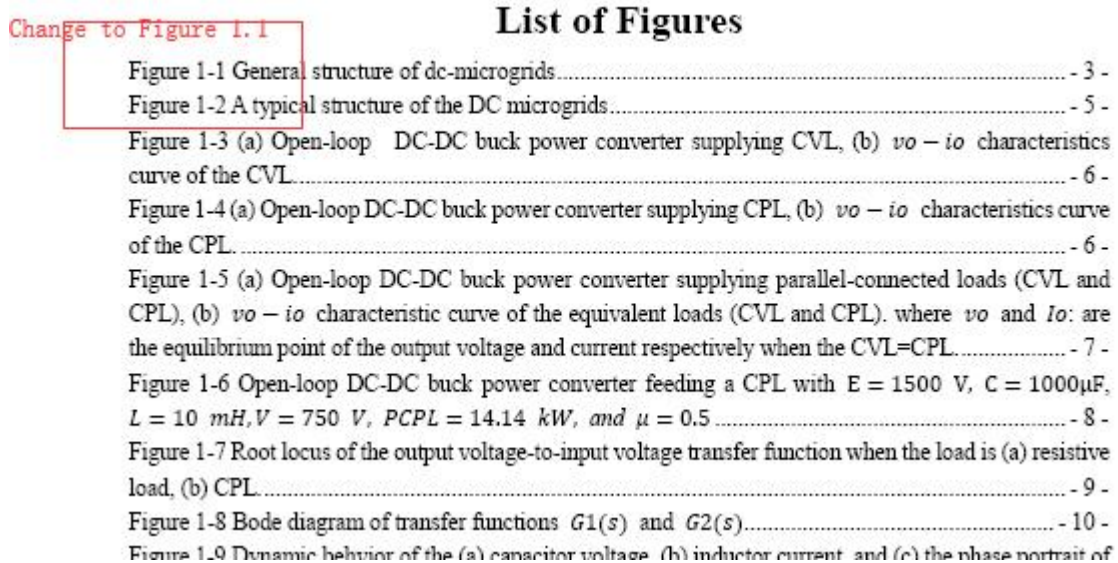


Table of Contents

List of Figures （Tables; Abbreviations）

For the list of figures, the content should be in font size 12, Times New Roman and line spacing of 1.25 times. The serial number the first figure of the first chapter should be “Figure 1.1”, and between the serial number and the title content, there should be 2 characters.



Change to Figure 1.1

List of Figures

List of Figures （Tables; Abbreviations）

WRONG

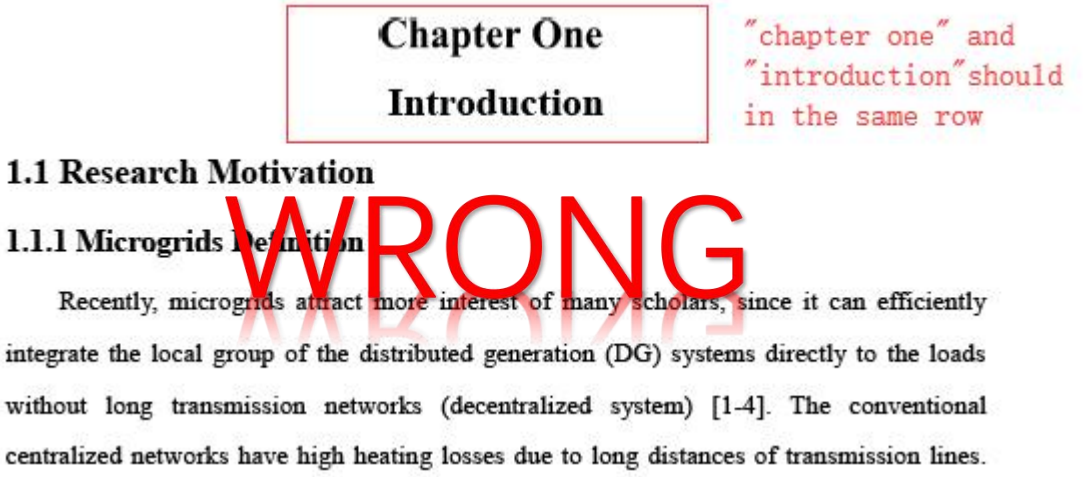
List of Tables

Sample

List of Abbreviations

WSN	Wireless Sensor Network
WPT	Wireless Power Transfer
WCV	Wireless Charging Vehicle
TSP	Travelling Salesman Problem
ESync	Energy Synchronization
GR-Protocol	Geometric Routing Protocol
RWSN	Renewable Wireless Sensor Network
BS	Base Station
RS	Rest Station
WPCD	Wireless Portable Charging Device
E_{max}	Maximum Energy of each Node
E_{min}	Minimum Energy of each Node
ACK	Acknowledgment

Chapter title

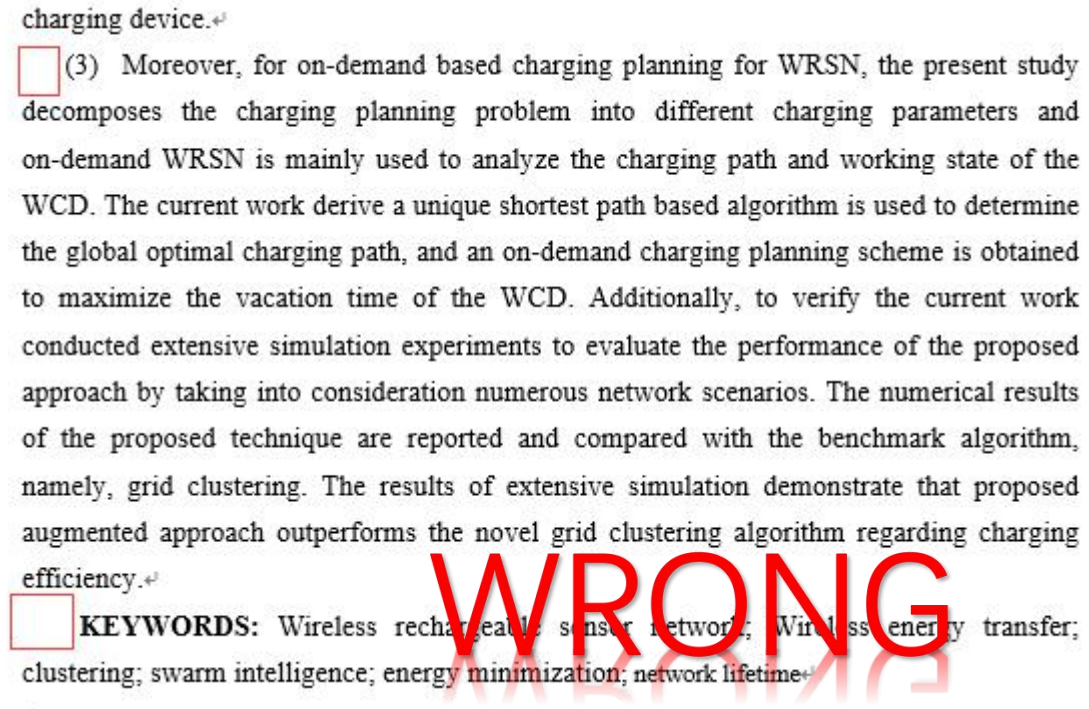


For titles of each chapter, the serial number and the chapter title should be in the same row, and between the serial number and the title, there are two characters.

It should be “Chapter 1” instead of “Chapter One”.

Paragraph and key words

- Before each paragraph there need to be 4 characters, for the main body of the dissertation/ thesis, including abstract, acknowledgements and the paragraph of “Key words”.


charging device.

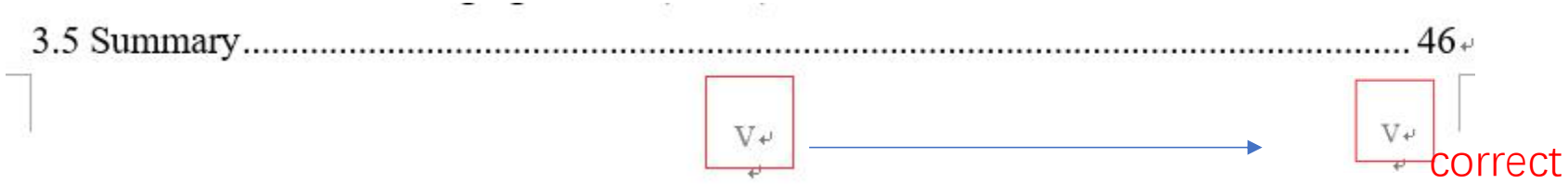
(3) Moreover, for on-demand based charging planning for WRSN, the present study decomposes the charging planning problem into different charging parameters and on-demand WRSN is mainly used to analyze the charging path and working state of the WCD. The current work derive a unique shortest path based algorithm is used to determine the global optimal charging path, and an on-demand charging planning scheme is obtained to maximize the vacation time of the WCD. Additionally, to verify the current work conducted extensive simulation experiments to evaluate the performance of the proposed approach by taking into consideration numerous network scenarios. The numerical results of the proposed technique are reported and compared with the benchmark algorithm, namely, grid clustering. The results of extensive simulation demonstrate that proposed augmented approach outperforms the novel grid clustering algorithm regarding charging efficiency.

KEYWORDS: Wireless rechargeable sensor network; Wireless energy transfer; clustering; swarm intelligence; energy minimization; network lifetime

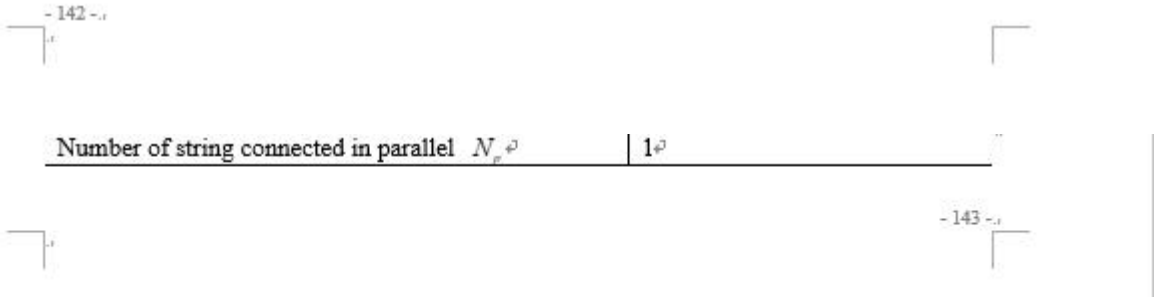
The correct format of “key words” is “Key words”. And there shouldn’t be any space between the content of abstract and “Key words” .

Page Number

- Page number, before the main body of the dissertation/ thesis, including the abstract, contents, list of figures and list of tables, should be capitalized roman letters, in the outside of each page



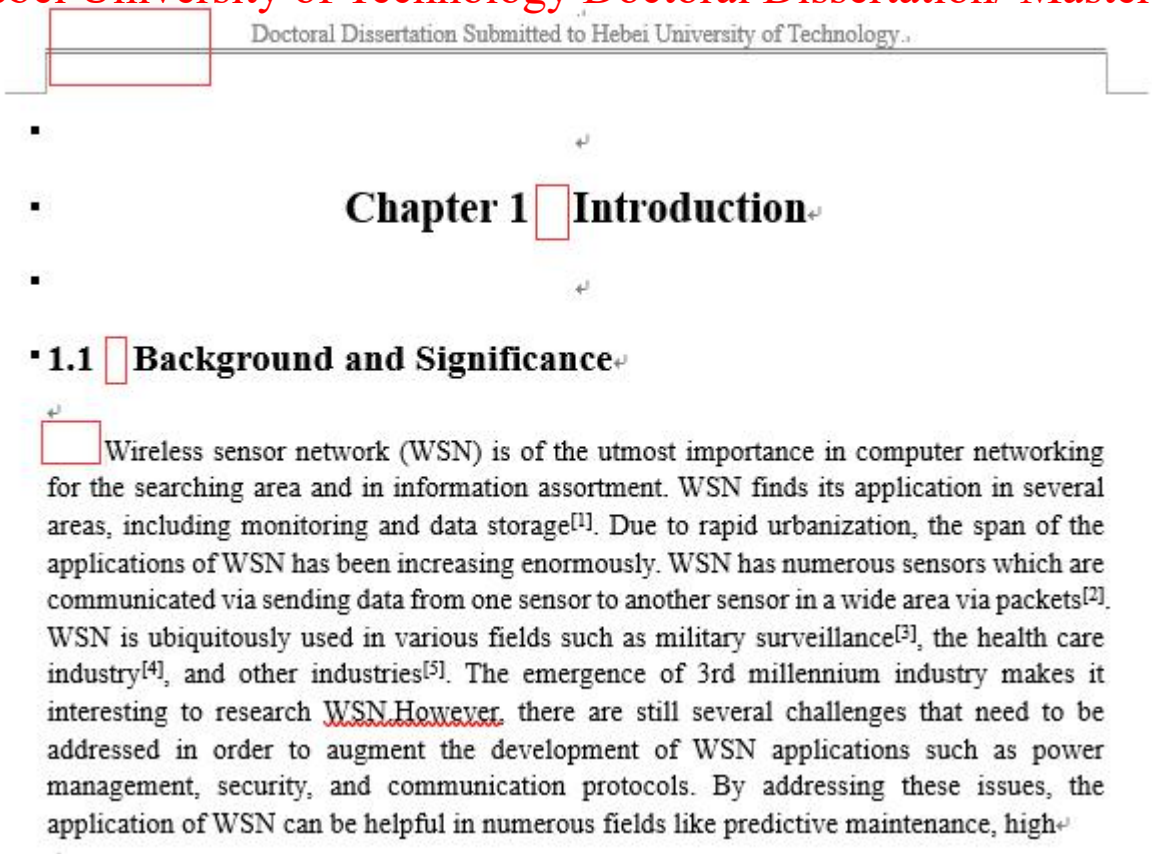
And for the main body, staring from “Chapter 1 Introduction”, the page number should be in Arabic numerals with two dashes before and after the number, put them on the outside of each page as well.



Headers

There should be double lines on the header. The header of dissertation/ thesis should start from the main body. In odd pages it should be "Hebei University of Technology Doctoral Dissertation/ Master Thesis", and in even pages it should be the title of dissertation/ thesis.

Hebei University of Technology Doctoral Dissertation/ Master Thesis



Figures

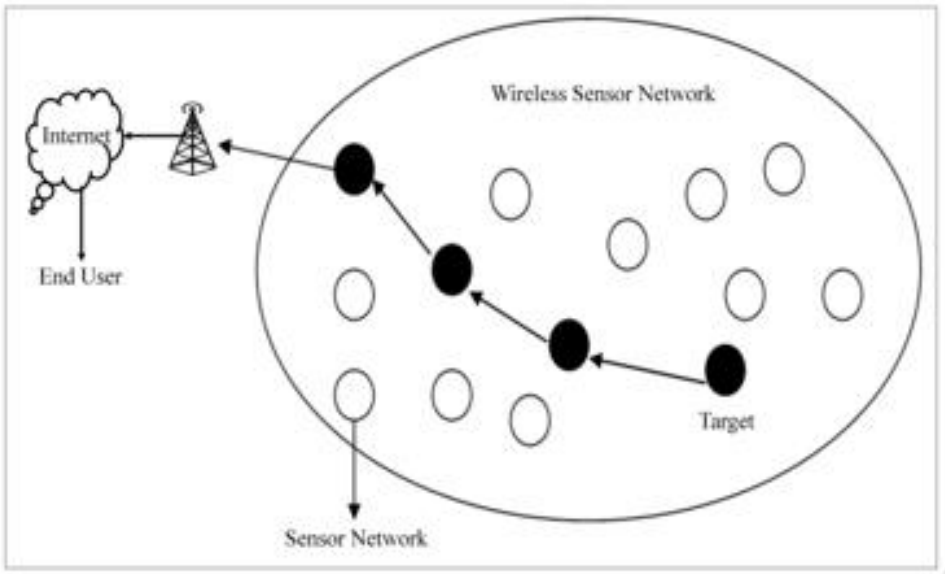


Figure 1.1 Wireless Sensor Network (WSN) System Architecture.

Wrong: There should be two key spaces between "1.1" and "Wireless". Also, for the title line, it needs 6 pounds after paragraph.

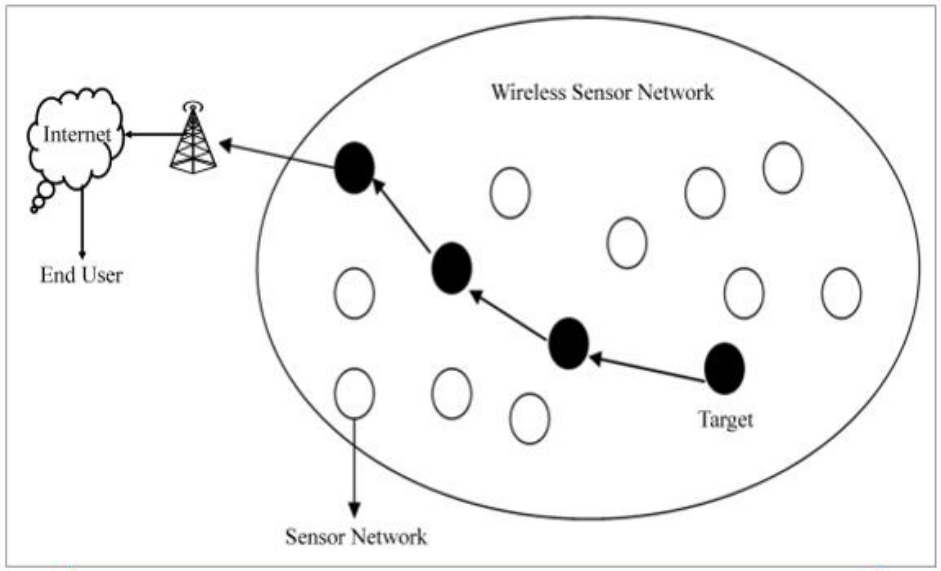
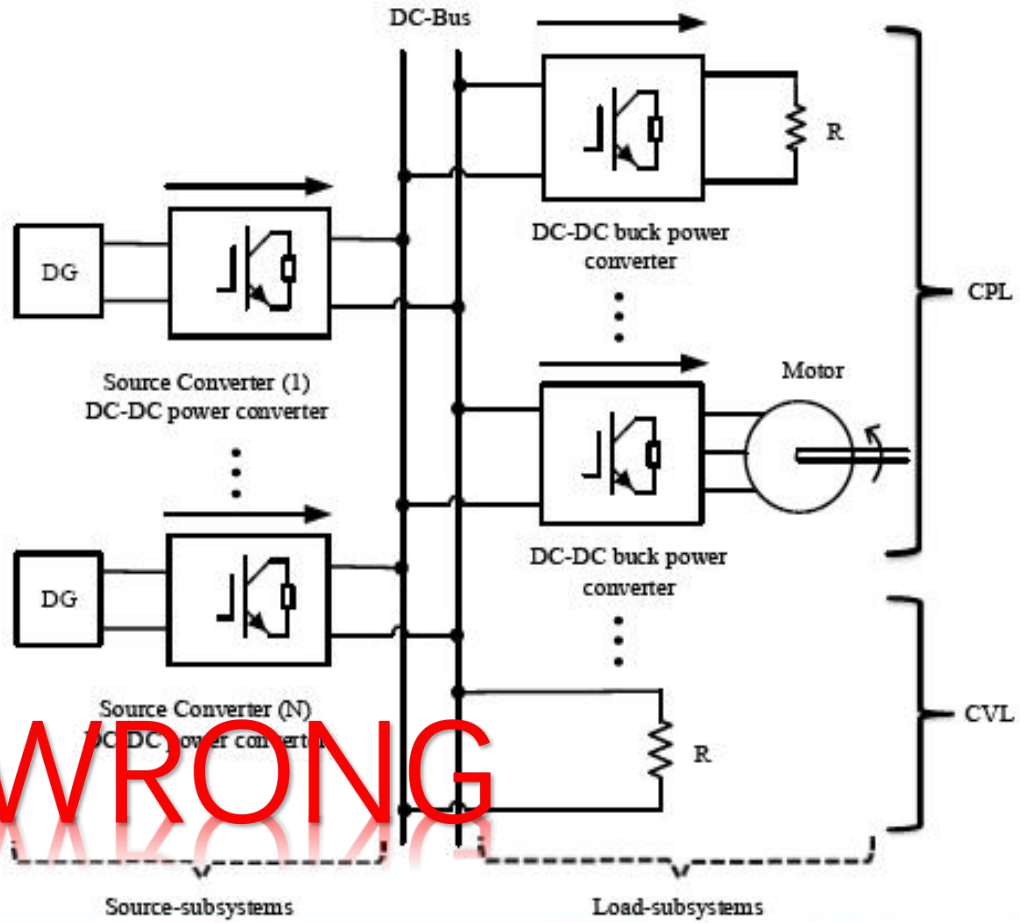


Figure 1.1 Wireless Sensor Network (WSN) System Architecture.

Correct format

The figure name should in the middle of the row and serial number should be 1.2, the font size of the title is 10.5 and for the row of title, it needs 6 pounds after paragraph.



WRONG

Figure 1-2 A typical structure of the DC microgrids

the figure name should in the middle of the row and the serial number should be 1.2

Sample

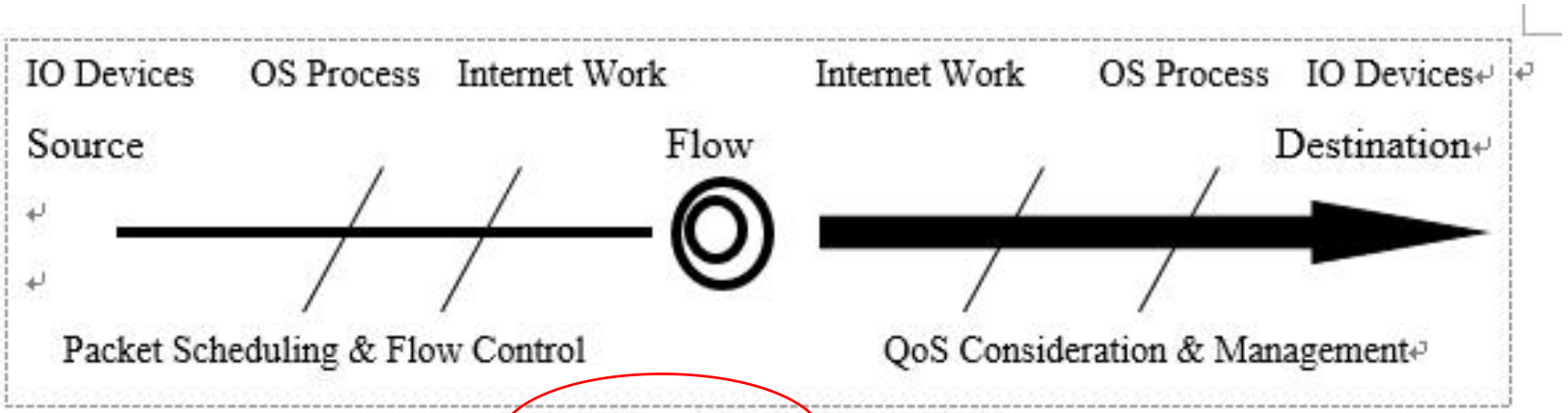


Figure 1.1 QoS Data Sequence

Three-lines table

Description	Nominal Values
DC Bus Voltage	$V_{dc} = 750\ \mathrm{V}$
Desired reference Voltage	$V_{pv}^{*} = 370\ \mathrm{V}$
Input Capacitance	$C_{pv} = 100\ \mu F$
Inductance	$L = 2\ mH$
Load resistance	$R_o = 50\ \Omega$
CPL power	$P_{CPL} = 14.44\ kW$

This is the correct format of a table. There should be three-lines table, with the upper and under 1.5 pounds thickness and the middle line should be 1 pound thickness, the contents of the table should be in the font size of 10.5

Examples of Problems

1.2.1. Energy Management

Energy management means are mainly based on node data processing technology and data transmission technology. The key part of data processing technology is to solve the energy consumption problem of processors, but most of the energy in the network is consumed in the process of data transmission [31]. Therefore, the design of communication protocol is an important means of energy management. Moreover, energy management methods, the main research directions are shown in Figure 1.3.

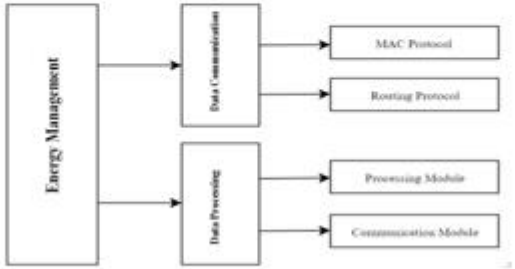


Figure 1.3 Classifications of Energy Management

1.2.2. Energy Harvesting

Wrong: there should not be any colon after the serial number; and for each title like 1.2.1, the font size is 14 pounds with line space 1.25 times. Before and after this title paragraph there should be 6 pounds.

1.2.1 Energy Management

Energy management means are mainly based on node data processing technology and data transmission technology. The key part of data processing technology is to solve the energy consumption problem of processors, but most of the energy in the network is consumed in the process of data transmission[31]. Therefore, the design of communication protocol is an important means of energy management. Moreover, energy management methods, the main research directions are shown in Figure 1.3.

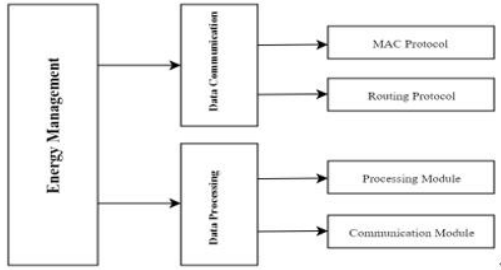


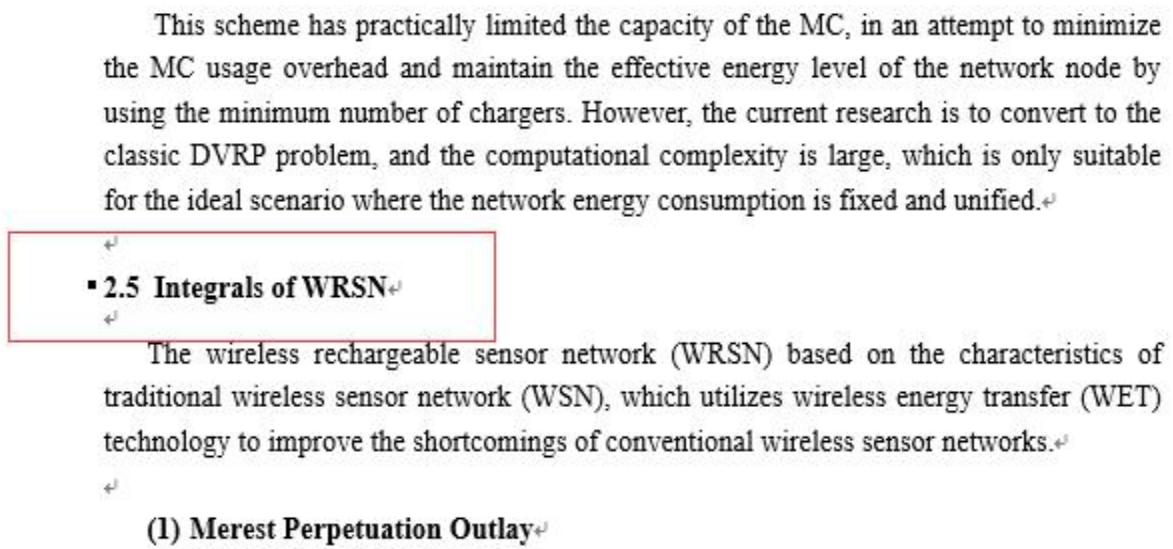
Figure 1.3 Classifications of Energy Management

1.2.2 Energy Harvesting

Correct format

Examples of Problems

- Please pay attention to font sizes of different level of titles, e.g.



This scheme has practically limited the capacity of the MC, in an attempt to minimize the MC usage overhead and maintain the effective energy level of the network node by using the minimum number of chargers. However, the current research is to convert to the classic DVRP problem, and the computational complexity is large, which is only suitable for the ideal scenario where the network energy consumption is fixed and unified.

2.5 Integrals of WRSN

The wireless rechargeable sensor network (WRSN) based on the characteristics of traditional wireless sensor network (WSN), which utilizes wireless energy transfer (WET) technology to improve the shortcomings of conventional wireless sensor networks.

(1) Merest Perpetuation Outlay

The size of title 2.5 is 12 pounds, but we require 16 pounds.

Descriptive rules of references

1) Book

[serial number] Author's last name, given name. Title[M]. version. Place of publication: Publisher, Publication year: page number

[1] Peebles P Z, Jr. Probability, random variable, and random signal principles[M]. 4th ed. New York: McGraw Hill, 2001: 20-22.

2) Journal article

[serial number] Author's last name, given name. article title[J]. Journal title. Publication year, volume number, (Issue/Issue number): page number

e.g.:

[2] Jassby D, Chae S R, Hendren Z, et al . Membrane filtration of fullerene nanoparticle suspensions: effects of derivatization, pressure, electrolyte species and concentration[J] . Journal of Colloid and Interface Science, 2010, 346(2): 296-302 . .

Descriptive rules of references

3) Proceedings

[serial number] Author's last name, given name. article title[C]//. Editor's last name, given name. Title of proceedings. Place of publication: Publisher, Publication year: page number

e.g.:

[3] Babu B V, Nagar A K. VBA in computer[C]//. Proceedings of the Second International Conference on Soft Computing for Problem Solving, New Delhi: Springer, 2014.

4) Report

[serial number] Author's last name, given name. title of report[R]. Place of publication: Publisher, Publication year: page number

e.g.

[4] World Health Organization . Factors regulating the immune response: report of WHO Scientific Group[R] . Geneva:WHO,1970 .

Descriptive rules of references

5) Dissertation

[serial number] Author's last name, given name. title of dissertation[D]. Place of store: Keeper, year: page number

e.g.

[5] Calms R B. Infrared spectroscopic studies on solid oxygen[D]. Berkeley: Univ. of California, 1965

6) Patents

[serial number] Applicant or owner's last name, given name. title of patent: patent number[P]. date of announcement or publish

e.g.

[6] Tachibana R, Shimizu S. Electronic watermarking method and system:US6915001[P]. 2005-07-05

Descriptive rules of references

7) Standard

[serial number] Standard number, Standard title[S].

e.g.

[7] Information and documentation-the Dublin core metadata element act, ISO 15836:2009[S]

8) Electronic literature

[serial number] Author's last name, given name. article title[type/identification of electronic literature]. (date of publish or renew) [date of quote]. Source of electronic literature

Type: DB for database, CP for computer programs, EB for electronic bulletin

Identification: MT for magnetic tape, DK for magnetic disk, CD for disk, OL for online network.

e.g.

[1] Dublin core metadata element set: version 1.1[EB/OL]. (2012-06-14)[2014-06-11]. http://dublincore.org/documents/dccs/.

Descriptive rules of references

9) Newspapers

[serial number] Author's last name, given name. article title[Z]. Title of newspaper, date of publish(edition)

10) others

[serial number] Author's last name, given name. article title[Z]. place of publish, publisher, year of publish

For references, the title is in the same format as the other chapter titles. There should be 2 characters between the serial numbers and the reference. The content of the references should in font size of 10.5. You should list at most three authors, and the others use et.al instead. The format of author name is: surname before given name.

References

[1] M. Yazdanian and A. Mehrizi-Sani, "Distributed Control Techniques in Microgrids," *IEEE Transactions on Smart Grid*, vol. 5, pp. 2901-2909, 2014.

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[6] H. Nikos, "The Microgrids Concept," in *Microgrids: Architectures and Control*, ed: IEEE, 2014, p. 1.

[7] Y. Ito, Y. Zhongqing, and H. Akagi, "DC microgrid based distribution power generation system," in *The 4th International Power Electronics and Motion Control Conference, 2004. IPEMC 2004.*, 2004, pp. 1740-1745 Vol.3.

[8] T. Dragičević, X. Lu, J. C. Vasquez, and J. M. Guerrero, "DC Microgrids—Part I: A Review of Control Strategies and Stabilization Techniques," *IEEE Transactions on Power Electronics*, vol. 31, pp. 4876-4891, 2016.

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[10] F. Nejabatkhah and Y. W. Li, "Overview of Power Management Strategies of Hybrid AC/DC Microgrid," *IEEE Transactions on Power Electronics*, vol. 30, pp. 7072-7089, 2015.

[11] S. K. Sahoo, A. K. Sinha, and N. K. Kishore, "Control Techniques in AC, DC, and Hybrid AC–DC Microgrid: A Review," *IEEE Journal of Emerging and Selected Topics in Power Electronics*, vol. 6, pp. 738-759, 2018.

[12] L. E. Zubieta, "Are Microgrids the Future of Energy?: DC Microgrids from Concept to Demonstration to Deployment," *IEEE Electrification Magazine*, vol. 4, pp. 37-44, 2016.

Sample

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[1] Song X Y, Zhang Z X, Lu N D, et al. Crystal structures and magnetic performance of nanocrystalline Sm-Co compounds[J]. Frontiers of Materials Science, 2012, 6(3): 207-215.

[2] Buschow K H J, Naastepad P A, Westendorp F F. Preparation of $SmCo_5$ permanent magnets[J]. Journal of Applied Physics, 1969, 40(10): 4029-4032.

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Achievements During Doctoral/ Master Research Duration

(3) Awards

[1] I have been Awarded Chinese GovernmentScholarship (CSC)to support my doctoral degree funding for the year 2014-2019 from China Government.

[2] I have been awarded a "**Cash Prize**" from the International school as excellent performance in the Courses in 2014.

The format of achievements, including published academic papers, books, patents and awards, are in the same format as the reference. And the font size here is 10.5

(2) Fund Projects NO NEED

[1] Tianjin Sci-tech Planning Projects (No. 14RCGFGX00846)

[2] Hebei Province Natural Science Foundation (No. F2015202239)

Fund projects should not be included in the achievements .

Acknowledgements

It is the last part of the dissertation or thesis.

The format of “Acknowledgements” should be in size 18, and one space row before and after that.

The content of acknowledgements is font size 12, line spacing 1.25 times.

Neither signature nor date should be shown on the bottom of your acknowledgements.