**Summary of Review Paper**

**Part I: Introduce the basic information of the paper, including title, authors, affiliations, publishing year and key words of research field. 介绍论文的基本信息**

[Sample]

Title: A Survey on Network Codes for Distributed Storage

4 Authors: Alexandros G. Dimakis, Kannan Ramchandran , Yunnan Wu, , Changho Suh

Affiliations: University of Texas at Austin; Standford University

Publishing: Proceedings of the IEEE · April 2011

Research Field: Distributed storage

**Part II: Summarize the main idea of the paper, including its research problem (why writing the paper), organization of the information (structure), major concepts, ideas or methods and discussion on future research. 概括总结论文的主要内容，明确作者写作目的、是按照什么样的逻辑结构写的文章，这些方法的主要思路和相互关联等等，作者对这一研究领域的未来展望。在PPT上可以通过导图或表格的形式呈现。**

[Sample]

In this paper, the authors give a survey on current methods of solving the problem of repairing a code when a storage node of the system fails. The authors organized the information according to different repairing mode. Three versions of repair have been considered in the literature: *exact repair, functional repair, and exact re- pair of systematic parts*. ( 概括主要内容和组织形式)

* The functional repair can be viewed as a multicast problem. Min-cuts in the information flow graph and network coding provides effective constructive solutions. In functional repair, the requirement is relaxed: the newly generated blocks can contain different data from that of the failed node as long as the repaired system maintains the MDS- code property.
* However, functional repair has limited practical interest since there is a need to maintain the code in systematic form. Therefore, there is a need for exact repair. In exact repair, the failed blocks are exactly regenerated, thus restoring exactly the lost encoded blocks with their exact replicas.
* The exact repair of the systematic part is a hybrid repair model lying between exact repair and functional repair. the systematic part is exactly reconstructed but the non-systematic part follows a functional repair model.

(简单概括三种方法思路及相互关联)

In the conclusion part, the authors also discussed three open problems to be studied in future. The first one is to investigate the influence of network topology,；Secondly, the issues of security and privacy are important for distributed storage. Finally small finite-field constructions require further investigation.

(作者对这一研究领域的未来展望)

**Part III: Your evaluation or reflection of the paper, including what you learn or the challenges of reading, etc.**

（略）