Proposal

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Chapter 1

Hypotheses

1.1 DHTs are better for distributed computing under many circumstances

Distributed Hash Tables (DHTs) are traditionally used as the backbone of P2P file-sharing applications and thus

Robustness and Fault-Tolerance

Load Balancing

Scalability

Heterogeneity

Ease of Adding, Removing, Maintaining, and money related factors

1.1.1 Different or subproblem: Certain DHTs are better at one application than another due to differences

Design Differences Impacts

Geometries

Implementation Differences Impacts

Recursive or iterative seek

Chapter 2

Justification and Why I Think It's Cool

2.0.2 DHTs well understood

2.0.3 DHTs are Highly used for their intended purposed

Bittorrent, WoW

2.0.4 DHTs are being effectively leveraged for other things besides file sharing already

PaaS

Load Balancing in the cloud

Computing is a natural extension

Chapter 3

Possible Experiments and Applications

3.0.5 Map Reduce

ChordReduce

Comparison of MapReduce paradigm on different DHTs

3.0.6 High End Computing

Metadata Management

Robustness

3.0.7 Graph Processing on a DHT

Embedding

Distribute the work for solving a graph on a DHT

Comparison to well established or state of the art methods

3.0.8 Machine Learning Problems on A DHT

Bayesian Learning

3.0.9 DHTs as a volunteer Platform

Chapter 4

DHT Background