

# Hacking Science

Computer Aided Scientific Survey  
Prefabrication

By Rob Ruigrok  
<https://github.com/rjruigrok/HackingScience>

# SCIgen - An Automatic CS Paper Generator

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## About

SCIgen is a program that generates random Computer Science research papers, including graphs, figures, and citations. It uses a hand-written **context-free grammar** to form all elements of the papers. Our aim here is to maximize amusement, rather than coherence.

One useful purpose for such a program is to auto-generate submissions to conferences that you suspect might have very low submission standards. A prime example, which you may recognize from spam in your inbox, is SCI/IIIS and its dozens of co-located conferences (check out the very broad conference description on the [WMSCI 2005](#) website). There's also a list of [known bogus conferences](#). Using SCIgen to generate submissions for conferences like this gives us pleasure to no end. In fact, one of our papers was accepted to SCI 2005! See [Examples](#) for more details.

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# Decoupling Boolean Logic from RPCs in Consistent Hashing

Rob Ruigrok

## ABSTRACT

Many analysts would agree that, had it not been for redundancy, the emulation of consistent hashing might never have occurred. In this position paper, we verify the understanding of voice-over-IP, which embodies the essential principles of theory. In this paper we validate not only that replication can be made reliable, real-time, and semantic, but that the same is true for systems.

## I. INTRODUCTION

The investigation of erasure coding that would make harnessing hierarchical databases a real possibility is an unproven quagmire. The notion that system administrators interfere with the construction of spreadsheets is always well-received. In the opinion of electrical engineers, this is a direct result of the study of architecture. The study of digital-to-analog converters would tremendously improve lossless technology.

In order to surmount this issue, we explore an analysis of virtual machines (MATZO), validating that Markov models can be made autonomous, replicated, and unstable. Indeed, public-private key pairs and 802.11b have a long history of interfering in this manner. This at first glance seems perverse

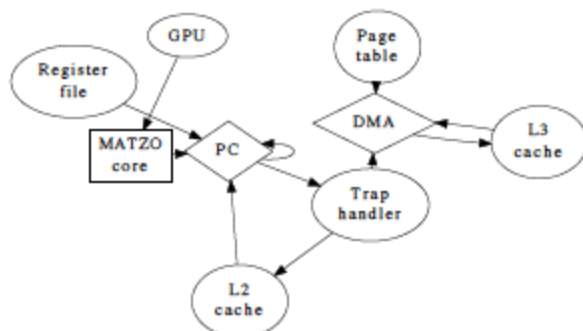
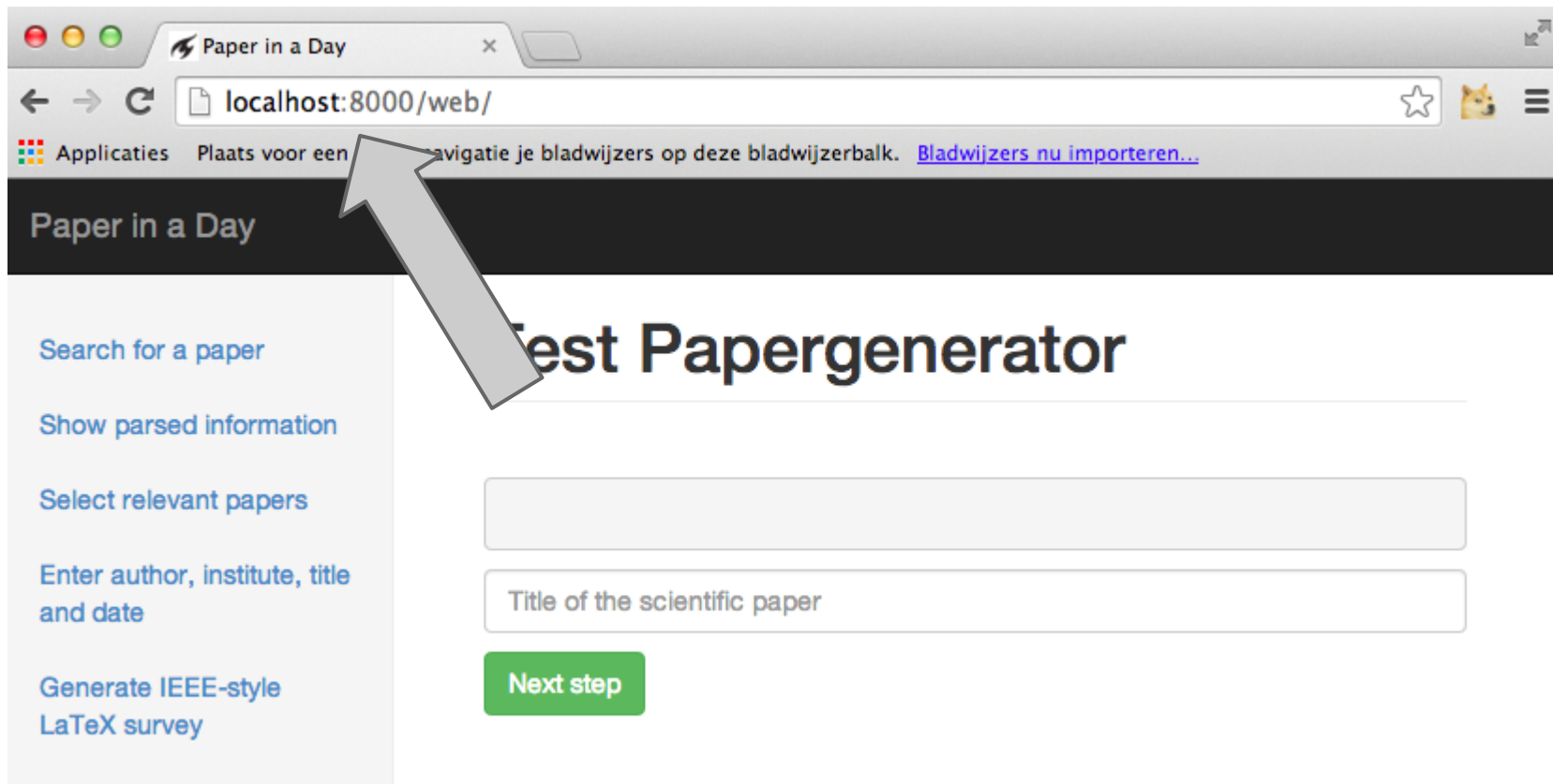


Fig. 1. The relationship between MATZO and the understanding of erasure coding.

conflicts with the need to provide spreadsheets to cyberneticists. We assume that erasure coding and vacuum tubes are never incompatible. This may or may not actually hold in reality. Furthermore, we show the schematic used by our methodology in Figure 1. Similarly, we instrumented a trace, over the course of several weeks, proving that our architecture is solidly grounded in reality. This seems to hold in most cases. Thence, the framework that our framework uses is feasible

```
robruigrok@MacBook-Air-van-Rob:~/HackingScience$ ./run.sh
need start|stop|restart
robruigrok@MacBook-Air-van-Rob:~/HackingScience$ ./run.sh start
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The bittorrent p2p file-sharing system: Measurements and analysis

## ABSTRACT:

In the past few years numerous P2P file - sharing and content distribution systems have been designed, implemented, and evaluated via simulations, real world measurements , and mathematical analysis . Yet , only few of them have stood the test of time and gained wide user acceptance. BitTorrent is the one that holds the lion's share among them and the reasons behind its success have been studied to a great extent with interesting results. Nevertheless, even though P2P content distribution remains one of the most active research areas, little progress has been made towards the study of the BitTorrent protocol ( and its variations), in a fully controllable and realistic simulation environment. In this paper we describe and analyze a full-featured and extensible implementation of BitTorrent for the OMNeT++ simulation platform. Moreover, since we aim at realistic simulations, we present our enhancements on a popular conversion tool for practical Internet topologies, as well as our churn generator that is based on the analysis of real BitTorrent traces. Finally, we set forth the results from the evaluation of our prototype implementation regarding resource demands under different simulation scenarios.

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  author={Johan A. Pouwelse and Pawel Garbacki and Dick H. J. Epema and Henk J. Sips},
  title={The Bittorrent P2P File-Sharing System: Measurements and Analysis.},
  booktitle={IPTPS},
  year={2005},
  pages={205-216},
  ee={http://dx.doi.org/10.1007/11558989_19},
  xcrossref={2005},
}
```

## CITATIONS:

PSIRP. (2009, Jun) Publish-Subscribe Internet Routing Paradigm. [Online]. Available: <http://www.psirp.org>

T. Karagiannis, P. Rodriguez, and K. Papagiannaki, "Should Internet service providers fear peer-assisted content distribution?" in Proc. of the Internet Measurement Conference (IMC), Berkeley, CA, USA, Oct 2005, pp. 63-76.

B. Cohen, "Incentives build robustness in BitTorrent," in Proc. of the Workshop on the Economics of Peer-to-Peer Systems, Berkeley, CA, USA, Jun 2003, pp. 116-121.

BitTorrent.org. (2009, Jun) BitTorrent Protocol Specification. [Online]. Available: [http://www.bittorrent.org/beps/bep\\_0003.html](http://www.bittorrent.org/beps/bep_0003.html)

L. Guo, S. Chen, Z. Xiao, E. Tan, X. Ding, and X. Zhang, "A performance study of BitTorrent-like peer-to-peer systems," IEEE Journal on Selected Areas in Communications, vol. 25, no. 1, pp. 155-169, 2007.

J. Pouwelse, P. Garbacki, D. Epema, and H. Sips, "The Bittorrent P2P file-sharing system: Measurements and analysis," in Proc. of the International Workshop on Peer-to-Peer Systems (IPTPS), Ithaca, NY, USA, Feb 2005, pp. 205-216.



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- Evaluation of caching strategies for an internet server,
- Network-aware forward caching,
- F Approximate Models for General Cache Networks,
- Performance Evaluation of ISP-Operated CDN,
- Distributed Cooperative Cache Method on Transit and Customer ISPs for Large Volume Video Contents Delivery,
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## KEYWORDS:

2 : Environmental economics  
2 : Testing  
2 : Internet topologies  
2 : Internet  
2 : Analytical models  
2 : BitTorrent module  
2 : discrete event simulation  
2 : OMNeT++ simulator  
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Featured and extensible abuse of BitTorrent simulation

Rob Ruigrok

April 11th, 2014

Delft University of Technology

BitTorrent is the one that holds the lion's share among them and the reasons behind its success have been studied to a great extent with interesting results. Nevertheless, even though P2P content distribution remains one of the most active research areas, little progress has been made

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\author{ Rob Ruigrok \ Delft University of Technology}
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\date{ April 24th, 2014 }
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```

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\begin{abstract}
```

In the past few years numerous P2P file - sharing and content distribution systems have been designed, implemented, and evaluated via simulations, real world measurements , and mathematical analysis . Yet, only few of them have stood the test of time and gained wide user acceptance. BitTorrent is the one that holds the lion's share among them and the reasons behind its success have been studied to a great extent with interesting results. Nevertheless, even though P2P content distribution remains one of the most

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  author={Haiyong Xie 0002 and Yang Richard Yang and Arvind Krishnamurthy and Yanbin Grace Liu and Abraham Silberschatz},
  title={P4p: provider portal for applications.},
  booktitle={SIGCOMM},
  year={2008},
  pages={351-362},
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\maketitle
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@inproceedings{DBLP:dblp_conf/sigcomm/XieYKLS08,  
  author={Haiyong Xie 0002 and Yang Richard Yang and Arvind Krishnamurthy and Yanbin (,  
  title={P4p: provider portal for applications.},  
  booktitle={SIGCOMM},  
  year={2008},  
  pages={351-362},  
  ee={http://doi.acm.org/10.1145/1402958.1402999},  
  xcrossref={2008},  
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# Featured and extensible abuse of the BitTorrent simulation

Rob Ruigrok  
Delft University of Technology

**Abstract**—In the past few years numerous P2P file - sharing and content distribution systems have been designed, implemented, and evaluated via simulations, real world measurements, and mathematical analysis. Yet, only few of them have stood the test of time and gained wide user acceptance. BitTorrent is the one that holds the lion's share among them and the reasons behind its success have been studied to a great extent with interesting results. Nevertheless, even though P2P content distribution remains one of the most active research areas, little progress has been made towards the study of the BitTorrent protocol (and its variations), in a fully controllable and realistic simulation environment. In this paper we describe and analyze a full-featured and extensible implementation of BitTorrent for the OMNeT++ simulation platform. Moreover, since we aim at realistic simulations, we present our enhancements on a popular conversion tool for practical Internet topologies, as well as our churn generator that is based on the analysis of real BitTorrent traces. Finally, we set forth the results from the evaluation of our prototype implementation regarding resource demands under different simulation scenarios.

**Index Terms**—distribution, remains, evaluation

## I. A PERFORMANCE STUDY OF BITTORRENT-LIKE PEER-TO-PEER SYSTEMS,

This paper presents a performance study of BitTorrent - like P2P systems by modeling, based on extensive measurements and trace analysis. Existing studies on BitTorrent systems

is also discussed and evaluated by simulations [1]

## II. ROUTER ASSISTED OVERLAY MULTICAST,

While multicasting is considered valuable for content distribution, it is not widely supported on the Internet. Content providers have instead turned to peer assisted content distribution in order to efficiently serve large numbers of clients via unicast, thus removing the bandwidth bottleneck from their side. The redundant unicast transmissions of the same packet are not avoided however, they are just distributed between the peers. Since peer assisted content distribution represents a major fraction of total Internet traffic, a more efficient distribution scheme would be of great interest to users and network operators alike. For this reason, we reconsider overlay multicast as a potential solution for mass content distribution. We present an overlay multicast scheme inspired by Scribe that exploits cooperative access routers so as to improve the multicast content distribution trees produced. We investigate the properties of our scheme compared to both regular Scribe and IP multicast over Internet-like network topologies, via a full fledged simulation platform that can be used as a basis for the realistic evaluation of multicast based content distribution applications. [1]

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