An elementary proof
of the reconstruction conjecture

Dagwood Remifa[*]

Department of Inconsequential Studies
Solatido College
North Kentucky, U.S.A.

remifa@dis.solatido.edu

Forgotten Second Author

School of Hard Knocks
University of Western Nowhere
Nowhere, Australasiaopia

no1remembers@me.woe.edu.ao

Abstract

The reconstruction conjecture states that the multiset of unlabeled vertex-deleted subgraphs of a graph determines the graph, provided it has at least 3 vertices. This problem was independtly introduced by Stanisław Ulam (1960) and and Paul Kelly (1957). In this paper, we prove the conjecture by elementary methods. It is only necessary to integrate the Lenkle potential of the Broglington manifold over the quantum supervacillatory measure in order to reduce the set of possible counterexamples to a small number (less than a trillion). A simple computer program that implements Pipletti's classification theorem for torsion-free Aramaic groups with simplectic socles can then finish the remaining cases.

Keywords: graph reconstruction conjecture, Broglington manifold, Pipletti's classification

1 Introduction

The reconstruction conjecture states that the multiset of unlabeled vertex-deleted subgraphs of a graph determines the graph, provided it has at least three vertices. This problem was independtly introduced by Ulam [10] and Kelly [5]. The reconstruction conjecture is widely studied [1, 3, 4, 6, 7, 8, 9] and is very interesting because ...... See [2] for more about the reconstruction conjecture.

Definition 1. A graph is *fabulous* if ....

Theorem 2. *All planar graphs are fabulous.*

Proof. Suppose on the contrary that some planar graph is not fabulous .... □

---

2 Broglington Manifolds

This section describes background information about Broglington Manifolds.

Lemma 3. *Broglington manifolds are abundant.*

Proof. $\square$

3 Proof of Theorem 2

In this section we complete the proof of Theorem 2.

Proof of Theorem 2.

$$|X| = abcdefghijklmnopqrstuvwxyz$$
$$= \alpha\beta\gamma \tag{1}$$

This completes the proof of Theorem 2. $\square$

Figure 1: Here is an informative figure.

Acknowledgements

Thanks to Professor Querty for suggesting the proof of Lemma 3.

References

[1] Béla Bollobás. Almost every graph has reconstruction number three. *J. Graph Theory*, 14(1):1–4, 1990.

[2] Wikipedia contributors. Reconstruction conjecture. *Wikipedia, the free encyclopedia*, 2011.

[3] J. Fisher, R. L. Graham, and F. Harary. A simpler counterexample to the reconstruction conjecture for denumerable graphs. *J. Combinatorial Theory Ser. B*, 12:203–204, 1972.

[4] Edith Hemaspaandra, Lane A. Hemaspaandra, Stanisław P. Radziszowski, and Rahul Tripathi. Complexity results in graph reconstruction. *Discrete Appl. Math.*, 155(2):103–118, 2007.

[5] Paul J. Kelly. A congruence theorem for trees. *Pacific J. Math.*, 7:961–968, 1957.

[6] Masashi Kiyomi, Toshiki Saitoh, and Ryuhei Uehara. Reconstruction of interval graphs. In *Computing and combinatorics*, volume 5609 of *Lecture Notes in Comput. Sci.*, pages 106–115. Springer, 2009.

[7] S. Ramachandran and S. Monikandan. Graph reconstruction conjecture: reductions using complement, connectivity and distance. *Bull. Inst. Combin. Appl.*, 56:103–108, 2009.

[8] David Rivshin and Stanisław P. Radziszowski. The vertex and edge graph reconstruction numbers of small graphs. *Australas. J. Combin.*, 45:175–188, 2009.

[9] Paul K. Stockmeyer. The falsity of the reconstruction conjecture for tournaments. *J. Graph Theory*, 1(1):19–25, 1977.

[10] S. M. Ulam. *A collection of mathematical problems.* Interscience Tracts in Pure and Applied Mathematics, no. 8. Interscience Publishers, New York-London, 1960.