Abstract Submitted for the MAR06 Meeting of The American Physical Society

Evidence of accelerated growth by edge copying and unfairness in the evolution of the AS level of the Internet BRUNO GONÇALVES, Emory University, JOSE MENDES, Universidade de Aveiro — It is well known that the Internet on the Autonomous System level is in constant evolution and growth. In this paper we show that for the freely available data for the period between Nov, 97 to March, 01 is compatible with a edge-copying model with a probability p=0.58. We also demonstrate that the Internet is intrinsically unfair since the nodes with higher connectivities remain the same throughout its history.

 $^1\mathrm{JFFM}$ was partially supported by project POCTI/FAT/46241/2002, POCTI/MAT/46176/2002 and NATO grant PST.CLG.979688 (2003).

Bruno Gonçalves Emory University

Date submitted: 30 Nov 2005 Electronic form version 1.4