Abstract Submitted
for the NEF08 Meeting of
The American Physical Society

Mining the Internet for Intro Physics Data: Sports Equipment
ANDREW PAWL, DAVID PRITCHARD, ANALIA BARRANTES, MIT — Problems using typical numbers for sports equipment parameters such as: "A 0.285 kg tennis racket strikes a 0.058 kg tennis ball..." are common in introductory physics. The numbers are usually reasonable, but often do not tell the whole story. Continuing with the example above, tennis ball masses are tightly constrained by the International Tennis Federation (ITF) to range between 56.0 g and 59.4 g, but the rules do not restrict the mass of tennis rackets. Instead, physics plays an important role in fixing the preferred tennis racket mass. In this presentation, we give an example of how internet research using the readily available commercial websites of sports equipment manufacturers can enrich introductory physics problems and spark interesting follow-up questions.

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Date submitted: 18 Sep 2008 Electronic form version 1.4