

DECISION SUPPORT VIA MATHEMATICAL PROGRAMMING FOR THE NFL “SURVIVOR” CONTEST

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ABSTRACT

Technology has greatly enabled sports fans to become involved in many ‘fantasy’ sports contests. Professional football in the U.S. (the National Football League, or “NFL”) is one of the more popular venues for fans to ‘compete’.

One contest that has grown in popularity in recent years is the so-called “NFL Survivor” contest. One reason for its growth may be due to the easily understood rules, which reduce most barriers to entry for participants.

Each week, in the common version of the contest, participants are asked to pick one NFL team (out of the 32). If that team wins, they remain in the contest for the next week. If the team they pick loses, the contestant is eliminated from the contest. There is only one restriction in picking teams; a specific team can be picked at most ONCE during the 17 week season. So, once a team is picked by a Survivor contestant, that team cannot be chosen in the following weeks. The contest continues until everyone has been eliminated (or until one person ‘survives’ and wins the contest).

This paper outlines an overview of a decision support approach designed to assist an NFL Survivor participant that uses available information (game point spreads, Vegas Book rankings, etc.) to help guide week-to-week decisions. Especially challenging in creating the decision support system is the uncertainty involved in competitive sports, and creating mechanisms to use known data to iteratively ‘look into the future’ each week when determining the best pick to make in Week X.

The paper will discuss the myriad of issues involved in creating an appropriate model. Small examples will be provided when appropriate to help clarify concepts. The decision support approach will be compared via simulation to various heuristics that could also be employed to measure the potential ‘value-added’ of the models.