MaxPreps Rankings (from *MaxPreps* website)

The most important thing to understand about how our computer power ratings system works is that it is 100% objective. MaxPreps uses a computer program to determine team rank. We do not poll coaches, sportswriters, or fans. Nor does our staff make any judgments on the merits of any individual team. Prior season history, comments on message boards, the size of the schools, their division, the league they're in, how good the school or league are historically, their geographic location, how well liked the school is, how good the league is in other sports-- are not considered in the *MaxPreps*. There is an algorithm used that computes the ratings using numerical facts and results. The system utilizes the huge number of game results stored in the *MaxPreps* database. Generally, the more a team wins the higher the ranking, but the system takes into account quality wins (against highly ranked opponents) and strength of schedule. For example, a team's ranking is hurt more by losing to a team that is ranked below them versus a team ranked ahead.

We will start explaining how the ratings work when margin of victory *is* used as a factor. It is much easier to explain that way. When margins are used, the differences in ratings between two teams is roughly a measure of how many *points* better one team is than another. In theory, an 80 should beat a 60 by 20, etc.

Example:

Assume the following ratings. **Don't worry about how they got to this point for now- that will be explained farther down.

Team A's rating is 10.
Team B's rating is 1.
Team C's rating is -5.
Team D's rating is -8.
Team E's rating is -10.

The way our program works is as follows: It systematically sorts through all the results for the season (season-to-date results if we're dealing with an in-progress season). It takes each result and compares it to what "should" have happened given the ratings of the teams to that point. It knows that if Team A played C, then A should have handled them fairly easily. If A lost that game, or even squeaked by with a narrow victory, A's rating is hurt, while C's is improved. The system keeps checking through all the results for every team. Sticking with team A though, let's say they also played D and won by 15 (that's about what they should have done- no real impact on either teams' rating there), demolished team B by 22 (which definitely helps A's rating), and beat D by 10 (not doing quite as well as could have been expected- another slight "ding" against A's rating.) When all is said and done, it takes the aggregate of how much better or worse they did than expected in all their games, divides that by the number of games played, and adjusts their rating accordingly. For example, if they averaged performing two points worse than expected, their rating drops from a 10 to an 8. (Please note: this is definitely over-simplified; it isn't this straight-forward-mathematical. Points aren't everything by any means- the win or the loss is always the most important thing, even when margins are used. There is a "diminishing returns" principle at play so as to not fully credit a team for blowing out a weak opponent. In addition to the cutoff point [15pts max] past which margins are not counted, there is a "win minimum" as well a maximum-- a number which no win is credited as being below...because, of course, a one point win isn't just barely better than a one point loss. Far from it.) All teams are adjusted similarly, and then we start over from the beginning with the new ratings- A is now an 8 and expected to perform accordingly, etc. This is done repeatedly throughout the season until there is no longer any movement in the ratings, and they settle in where they "should" be.

**Remember when we asked you to hold that thought on how they got to the point they started at? They

didn't start there actually. All teams start at 0. There is no bias at all - last year's stats or pre-season projections are not used as a starting point. Everybody starts at 0 and the ratings run continuously until the movement stops when the season ends. It's just much harder to conceptualize that way (and you thought ***this*** way was hard!)- that's why we started the example off with the teams already having ratings.

Rest assured, the process is many times more accurate than the over-simplified points systems that many states are trying as an alternative to the subjectivity of the human process. Systems where, for example, 3 points are given for a win against a large school, 2 points for a win against a medium-sized school, etc. simply can't compare with what we're doing here. It is also much fairer than looking solely at just overall won-loss records without factoring who those wins-losses were against and by how much.