LEAST SQUARES MODEL FOR PREDICTING COLLEGE FOOTBALL SCORES

by

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1. Introduction

The NCAA Division I-A national football champion has traditionally been decided based on the results of a combination of popular polls. Until 1998, the determination was made by two separate groups of voters comprised of football coaches and sports writers throughout the country. The Bowl Championship Series (BCS), organized in 1998 attempts to avoid the possibility of a dual national championship which arises when a separate champion is named by each group. The BCS consists of an alliance between four major bowls, six major conferences and the University of Notre Dame. Under the current BCS guidelines, eight teams, which must include at least the regular season champions of each of the six member conferences and the teams ranked one and two by the BCS ranking system, are selected to play in the four BCS bowls. The two top ranked teams play in the bowl designated for that year, rotated among the four participating bowls, to be the National Championship Game. The BCS rankings are determined by a weighted score based on the AP and USA TODAY/ESPN Coaches polls, strength of schedule, number of losses, wins against other ranked teams and eight computer rankings.

The championship game played in January 2001 between Oklahoma and Florida State caused a great deal of controversy. The third ranked team, Miami only lost one game during the season – their season opener at fourth ranked Washington – and edged Florida State in both the AP and coaches polls. Florida State's only loss, however, was a three point mid-season game against Miami. Even though Miami had beaten Florida State, the Seminoles won the right to play in the Orange Bowl for the championship due to the strength of their computer rankings. One of the key factors behind this fact was margin of victory. Florida State had won their games by an average of 36 points while Miami only averaged a 29 point margin of victory. The BCS considered this outcome to be strange enough that during the following summer, the eight computer polls were

revamped by either changing the algorithms used or replacing polls altogether in favor of limiting the influence of margin of victory on the results.

The 2002 Rose Bowl championship featuring Miami and Nebraska again exhibited significant controversy. Again, the second ranked team's only loss came at the hands of the third ranked team. This time, Colorado's 62-36 win over Nebraska in the last game of the regular season kept the Huskers from playing in the Big Twelve championship. Colorado's two losses were almost overcome by another new factor added to the ranking calculation, a reward given for defeating teams while they are ranked in the top 15. The Buffaloes, however, could not overcome the influence of the computer polls, most of which ranked Nebraska number two behind unanimous number one and ultimate national champion Miami. Colorado's two impressive wins over Nebraska and Texas in the final weeks before the bowl season left them 0.05 points short of Nebraska, earning a berth in the Fiesta Bowl against fourth ranked Oregon.

Again, the BCS felt that the margin of victory was too great a factor. In June of 2002, they announced that the participating computer models would be required to completely eliminate the effect of margin of victory.

Such controversy is the result of the BCS introducing their complicated calculations for determining the national champion. For enthusiasts, the controversy is a big part of what makes the game enjoyable. For many less sophisticated fans, the calculation is tiresome and incomprehensible. Some feel that because they cannot make the calculations on their own without the aid of the computers, it cannot be a worthwhile system. At the root of the controversy is the belief of many fans that the system is ineffective at selecting the two best teams to play for the national championship. What this perspective fails to see, however, is that by definition the system is perfect at doing what it intends to do: select two teams to play for the national championship.

The results of any competition are determined by its rules. If the rules bestowed the championship on the school that sold the most hot dogs at all of its games, then the

team with the hungriest fans would likely be named the winner regardless of the score of any games. Because the two championship contestants are determined by the results of the BCS system, the system always accomplishes its goal. What it may not do is select the two best teams for the championship, but even if all 117 teams played a complete round robin tournament, the subjective nature of the term "best" will always leave someone unsatisfied.

This project introduces a model similar to those used by the BCS computer polls for evaluating the strength of college football teams. Results from the model are run several times using different sets of assumptions. This model is then compared against seven of the eight BCS computer polls for each week of the regular season from the sixth week forward for the 2001-2002 season to measure its success as a predictor of future winners.[1] The final results of all models, including all eight BCS models, are also compared to gauge their ability to choose a champion.

2. The Model

To establish a base model, we first identify various elements affecting the result of any individual game. Points are scored in a football game by one team's offensive players moving the ball past the defensive team's goal. Because players rarely play on both offense and defense, each side can be thought of as independent contributors to any team's combined performance. A team's success then, is a combination of both their offense scoring points and their defense preventing opponent's scores.

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[1] Weekly rankings from Dr. Peter Wolfe and Jeff Sagarin were not available for this part of the comparison. Final rankings for both models, however, are used in section 4. Weekly rankings for the other models were not generally available before the sixth week.

Let teams be identified by i or j = 1, …, T and games g = 1, …, G. Similar to Bassett (1996), the base model consists of 2G scores as a linear combination of each team's own offense plus the impact of the opposing team's defense plus an error term and is written as

$$S_{ij} = D_j + O_i + e_{ij} \quad (1)$$

for all i for each j against whom i plays. In (1), S_{ij} represents team i's score against team j, D_j is the total points team j's defense can be expected to prevent team i from scoring, O_i is the total points team i's offense can expect to contribute. Roughly, D_j is the contribution of team j's defense and O_i is the contribution of team i's offense. e_{ij} is the random error for the particular game between teams i and j. e_{ij} is assumed to be an independent random variable with mean of 0 and unknown variance σ^2.[2]

The base model in (1) is expressed in matrix form by constructing a 2G x 1 column vector **S** by partitioning a vector of scores for each game for team i onto a vector of scores for the same games for the corresponding team j; a 2G x (2T-1) design matrix **X** by partitioning a G x T-1 matrix where

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[2] It can be argued that the scores of two teams in the same game may be correlated. This is especially likely if there are extenuating circumstances such as bad weather preventing both teams from scoring, or if both teams have great incentive to win and thus play harder such as in a bowl game. Indeed, using the combined model with actual scores as discussed later, the game with the largest combined residuals was the GMAC Bowl played on December 19, 2001 between Marshall and East Carolina. Both teams' average opponents' scores was 30 points and average scores were 39 and 35 points respectively. The final score of the GMAC Bowl game was Marshall 64, East Carolina 61. It is easy to conclude that both teams pushed each other in the scoring for this game. If e_{ij} and e_{ji} and therefore S_{ij} and S_{ji} are actually correlated the model is calculated using a generalized least squares method instead of the ordinary method used by SAS PROC REG.

A plot of the residuals e_{ij} and e_{ji} from the combined actual model generally supports our assumption that the opposing scores are not correlated. (See Appendix F.) If correlation exists we would expect a pattern to arise in the plot. Barring such a pattern we conclude that our assumption is correct. The correlation coefficient for these points calculates to about 0.29 showing positive but weak correlation.

$$X_{gi} = \begin{cases} 1 & \text{if defense is the } i\text{th team,} \\ 0 & \text{otherwise} \end{cases}$$
$$i = 1...T$$

$$X_{g(i+T)} = \begin{cases} 1 & \text{if offense is the } i\text{th team,} \\ 0 & \text{otherwise} \end{cases}$$
$$i = 1...T-1$$
$$g = 1...G$$

and a *(2T-1)* column vector **D** with elements D_1, …, D_T and O_1, …, O_{T-1} to be estimated. The resulting linear equation is

$$\mathbf{S} = \mathbf{XD} + e \qquad (2)$$

The order of scores in **S** is irrelevant. I have chosen arbitrarily to list the scores for each team first chronologically, then alphabetically by winning team, with scores in bottom half for the losers corresponding to the winners of the same games in the top half. Of course, this then determines the design of the other elements of (2).

A team is chosen to be excluded from the calculation of the offensive estimator in order to preserve the non-singular attribute of the design matrix. The offensive estimator for this team is defined at zero for calculation of a comparative index as described below.

As an example of how this works look at the following sequence of games:

Date	Team 1	Score	Team 2	Score	Home Team
29Sep01	UTAH	37	NEW MEXICO	16	UTAH
13Oct01	BRIGHAM YOUNG	24	NEW MEXICO	20	NEW MEXICO
27Oct01	COLORADO ST.	19	UTAH	17	COLORADO ST.
01Nov01	BRIGHAM YOUNG	56	COLORADO ST.	34	BRIGHAM YOUNG
17Nov01	BRIGHAM YOUNG	24	UTAH	21	BRIGHAM YOUNG
17Nov01	COLORADO ST.	24	NEW MEXICO	17	NEW MEXICO

Applying the data from these games to (2), we get the following:

$$\begin{bmatrix} 37 \\ 24 \\ 19 \\ 56 \\ 24 \\ 24 \\ 16 \\ 20 \\ 17 \\ 34 \\ 21 \\ 17 \end{bmatrix} = \begin{bmatrix} 0 & 0 & 1 & 0 & 0 & 0 & 1 \\ 0 & 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 1 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 1 & 0 \\ 1 & 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 & 1 \\ 1 & 0 & 0 & 0 & 1 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 & 1 \\ 0 & 1 & 0 & 0 & 1 & 0 & 0 \end{bmatrix} \bullet \begin{bmatrix} D_1 \\ D_2 \\ D_3 \\ D_4 \\ O_1 \\ O_2 \\ O_3 \end{bmatrix} + \mathbf{e}$$

where D_1 through D_4 represent the defensive contribution by Brigham Young, Colorado State, New Mexico and Utah and O_1 through O_3 represent the offensive contribution by Colorado State, New Mexico and Utah, respectively. O_4, representing the offensive contribution by Brigham Young, is set to zero as a reference point. In the full model these matrices are generated using all 652 games to estimate **D**.

It is worth noting that setting the reference point O_4 to zero does not mean that the offensive contribution for Brigham Young is assumed to be zero. A system simultaneously estimating $\hat{O}_i$ s and $\hat{D}_i$ s for all teams results in a singularity, or in other words, there is no unique solution to the system. By removing one estimator, the singularity is resolved and a unique solution is obtained. The ranking system relies on the comparison of the estimators for each school and not the magnitude. The arbitrary choice of which estimator to remove results in creating an anchor point for all of the other estimators. Having chosen to use an offensive estimator, if a strong school were chosen, all other offensive estimators should be negative to suggest the strength of the zero value of the reference point. Likewise positive $\hat{O}_i$ values result from assigning the reference

value to a school with a weaker offense. In our example, the fact that Brigham Young scored the most points among the four schools results in negative $\hat{O}_i$ values for the other schools.

In our example, $\hat{\mathbf{D}}$ is calculated as

$$\hat{D}_1 = 38$$
$$\hat{D}_2 = 40.25$$
$$\hat{D}_3 = 35.375$$
$$\hat{D}_4 = 28.375$$
$$\hat{O}_1 = -8.25$$
$$\hat{O}_2 = -17.875$$
$$\hat{O}_3 = -12.875$$

Again, the resulting positive values for $\hat{D}_i$ do not mean that the defensive contribution of the other three schools is to score touchdowns for the opposing team. What it suggests instead is that the reference team (in this case BYU) facing opponent *i* can be expected to score $\hat{D}_i$ points. The score for other opponents, then, will vary according the value of the $\hat{O}_i$ variable.

To calculate a predicted score for a future matchup we would add a given team's $\hat{O}_i$ score to their opponent's $\hat{D}_i$ score. A ranking can be defined by subtracting the $\hat{D}_i$ for each team from the $\hat{O}_i$ for the same team and sorting according to $Rank_i = \hat{O}_i - \hat{D}$. This index can be used to make the same relative comparison as calculated predicted scores based on the relational statement

$$S_{ij} = O_i + D_j > S_{ji} = O_j + D_i .$$

Subtracting D_i and D_i from both sides of the equation gives

$$\hat{O}_i - \hat{D}_i > \hat{O}_j - \hat{D}_j .$$

Thus, $Rank_i > Rank_j$ implies a prediction of the victor of a hypothetical *ij* matchup.

Below is a summary of the calculations for our example including the number of wins, losses and points scored both for and against each team in the group.

Rank	Team	$\hat{O}$	$\acute{D}$	Index	W	L	PF	PA
1	BRIGHAM YOUNG	0	38	-38	3	0	104	75
2	UTAH	-12.9	28.38	-41.25	1	2	75	59
3	COLORADO ST.	-8.25	40.25	-48.5	2	1	77	90
4	NEW MEXICO	-17.9	35.38	-53.25	0	3	53	85

Given the $\hat{O}_i$ and $\hat{D}_i$ estimates shown for each team, a theoretical round robin tournament between these four teams can be constructed. In the following table, predicted scores were calculated for the teams listed in the left hand column for a hypothetical game played against each team listed along the top. For example, in a hypothetical game between Utah and Colorado State, the score is predicted from the table above to be Utah -12.9 + 40.3 = 27.4, Colorado State –8.3 + 28.4 = 20.1.

	Opponent			
Score	BYU	UTAH	CSU	UNM
BRIGHAM YOUNG	0	28.375	40.25	35.375
UTAH	25.125	0	27.375	22.5
COLORADO ST.	29.75	20.125	0	27.125
NEW MEXICO	20.125	10.5	22.375	0

These scores are then projected into the following matrix where a win by the row team is represented by a 1, and a loss by a -1. Teams cannot play themselves and therefore the diagonal is populated with zeroes.

	Opponent			
Win	BYU	UTAH	CSU	UNM
BRIGHAM YOUNG	0	1	1	1
UTAH	-1	0	1	1
COLORADO ST.	-1	-1	0	1
NEW MEXICO	-1	-1	-1	0

Note that when teams are listed in descending order according to their index value the resulting matrix is triangular with ones in the top half and negative ones in the bottom. The result from this hypothetical "win matrix" demonstrates the interpretation of the index value as identifying a comparative ranking between teams. A given team is predicted to defeat any team with a lower index.

The ranking resulting from the calculated index for each team does not completely correspond with the expected ranking based on each team's actual record within the group because of differences between margins of victory for Utah and Colorado State. Of the six games in this example, two were decided by over twenty points while the other four were within a touchdown. Although Colorado State won the matchup with Utah, they were also on the losing end of one of the twenty plus games, while Utah was the winner of the other one. Looking at the total points scored by each team and their opponents, the $\hat{O}_i$ estimator reflects the fact that CSU scores slightly more points overall than Utah while the $\hat{D}_i$ estimator reflects the fact that CSU's opponents scored significantly more points than did Utah's. The curious nature of this result is discussed in more detail in section 3, Margin of Victory.

In the game of football defensive teams can score by converting a turnover or causing a safety. Although the result of such plays is to increase the offensive contribution to a team's score, an equivalent impact is measured instead by further reducing the opponent's score. This then would tend to overstate the offensive value to the detriment of the predictive ability of the model, but these plays occur infrequently enough that the impact on the offense is assumed to be negligible. Bassett (1996) points out that in addition to providing scoring opportunities, a good offense can improve defensive position by pushing the ball far upfield, thus keeping the opposing offense's starting point farther away from their goal. Likewise, a good defense can make their offense look better by giving them better starting field position by keeping the opposing offense farther away from the goal. We hope that these factors as well are to be included in the actual estimates.

Although the abilities of the offensive and defensive players are the most important elements of the score of any game, many other factors are also involved. Some of these factors can also be included in the base model.

Where a game is played can have a significant effect on the result of the game. Eccles Stadium filled to capacity will give a nice lift to the players at the University of Utah, but the raucous crowds at Autzen Stadium give the Oregon Ducks a huge advantage.[3] Just ask the 2002 BYU basketball team (16-0 at home, 2-11 on the road) where they would have preferred to play each game that season. Harville and Smith (1994) show that not only is home court an advantage in college basketball, but every court offers a measurably different advantage to its home team. They further show,

$$H_i = \begin{cases} 1 & \text{if team } i \text{ is the home team,} \\ 0 & \text{otherwise} \end{cases}$$
$$i = 1...2G$$

however, that this advantage applied to individual home courts is not different enough from an equal advantage assigned to all home teams to justify the increase in computing resources necessary to calculate it. We will accept their conclusion based on the similar idea that a simpler model is better and any advantage gained by assigning independent estimators for each home field is not worth the added complexity and adopt an equal overall home field advantage. Our base model is amended by adding a home field advantage term, to the home team's score in each game where h is the average effect of home field advantage on the score and

While the basic model for scoring the visiting team remains the same, it is amended to read

$$S_{ij} = hH_i + D_j + O_i + e_{ij}. \qquad (3)$$

In matrix form, equation (3) works the same for both home and away teams. A 2G x 1 column vector, **H**, made up of 1 when the corresponding score in **S** is produced by the home team, and zeroes otherwise is added to (2) to produce

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[3] I have never actually attended a *college* football game at Eccles Stadium, and the only time I went to Autzen Stadium was the first home loss for the Ducks in over four years, so I cannot personally attest to these statements.

$$\mathbf{S} = h\mathbf{H} + \mathbf{XD} + e. \tag{4}$$

Some conferences seem to have no end to talented football teams while others can't seem to attract capable players. The idea that some conferences are superior to others is central to the concept of six specific conferences by definition always being involved in BCS bowls while teams from other conferences have only a limited opportunity to participate. Schools from more competitive conferences will regularly play against difficult opponents. This can work as both an advantage and as a disadvantage.

For example, if all teams in a particular conference win every non-conference game and then play all other teams within their conference, it is a reasonable conclusion that the best team in that conference is the best in the country. It is just as reasonable to conclude that other teams in such a conference could also be ranked above every other team in the country. This line of reasoning could lead to the tenth best team in the country finishing 0-9 in conference play with no other support existing for ranking them lower than tenth. As unlikely as this scenario is, the strength of the conference should not weigh to the detriment of teams who otherwise would have had stronger records had they been in a lesser conference.

To test the importance of this effect, terms can be added to the base model for the K = 12 Division I-A conferences to produce

$$\mathbf{S} = h\mathbf{H} + \mathbf{XD} + \mathbf{YC} + e. \tag{5}$$

where

$$Y_{gk} = \begin{cases} 1 & \text{if team } i \text{ is a member of the } k\text{th conference,} \\ 0 & \text{otherwise} \end{cases}$$

$$k = 1...K-1$$

$$g = 1...G$$

and column vector **C** measure the scoring impact among conferences.

This conference effect is only valid because each team has non-conference teams on its schedule. For intra-conference play, the contribution of C_k is the same for both teams and contributes equally to the magnitude of each team's predicted score. To avoid collinearity, one conference is arbitrarily omitted from the model. The resulting C_k of zero for this conference provides a baseline for all other conferences. The I-A Independents tend to play teams in certain conferences, but not necessarily each other. The nature of this group of schools makes it easy, then, to assign this arbitrary distinction to them.

The division a school plays in would similarly have an affect on the skill level of that school's athletes. Although I have regularly used this factor within this model to predict scores for teams in all NCAA divisions, only games with both teams from NCAA Division I-A schools are used for this project.

Coaches can make a big difference to how well a team performs, especially in collegiate athletics. Because the coach and his staff's influence is reflected on a whole team this factor is assumed to be part of the offensive and defensive variables in the base model. Related to the coach's impact, especially through recruiting, is the effect of a given team's history. Past successes tend to influence young players in choosing where to attend. It also bears on the level of support offered by fans both financially and physically. Just as a coach is responsible for recruiting, alumni buy season tickets and this effect is assumed to be measured in the base player and home field parameters. Observing the recent success coach Lou Holtz has experienced at South Carolina, it would be interesting to see how coaching affects the predictive value of a model using several years of data, but due to limited available information this project does not consider them separately.

How a team is portrayed in the media can strongly affect how that team is perceived by itself and its opponents. You might say that an effect of media polls on both a ranked team or their opponents can be to either "psyche up" or "psyche out" the team.

An unranked team going into a game against the current top ranked team can be either intimidated by the other team's reported stature or motivated to play harder to prove themselves a contender. Similarly a highly regarded team can either take their high rating into a game with added confidence, or they can overestimate their own abilities and lose face with a loss. Although a team's national ranking is usually a result of their superior talent, it can also be an overstatement of lucky breaks or overestimation of opponent's skills in earlier games. These effects are especially pronounced early in the season. Whatever the manifestation, it is reasonable to expect that ranking in one of the two media polls can have an affect on the performance of both sides in a given game.

The Associated Press publishes a ranking of Division I-A football teams for each week during the season. This ranking is computed based on points awarded to teams by sports writers throughout the country. ESPN publishes a similar ranking produced from a poll of college coaches. Each of these polls lists the points used in calculating the rankings. These point totals are now added to the model to produce

$$\mathbf{S} = h\mathbf{H} + \mathbf{XD} + \mathbf{YC} + a\mathbf{Z}_1 + e\mathbf{Z}_2 + e. \qquad (6)$$

where the vectors $\mathbf{Z}_1$ and $\mathbf{Z}_2$ consist of the voting points allocated to each corresponding team during the week immediately preceding each given game by the AP and ESPN/Coaches media polls, respectively, and $\boldsymbol{a}$ and $\boldsymbol{e}$ are parameters measuring the voting points from the AP and ESPN/Coaches media polls, respectively. It follows, then, that given column vectors $\mathbf{Z}_1$ and $\mathbf{Z}_2$ are populated with positive values only for each team that is ranked during the week the corresponding score occurred and with zero for all other teams.

3. Margin of Victory

The controversy discussed in the introduction established the concern the BCS has over the effect of margin of victory in establishing a valid ranking. In 2001, four of the eight computer rankings used by the BCS included some allowance for margin of victory.

Of these four Herman Matthews and David Rothman used a multiplier that decreases as the margin widens, Peter Wolfe capped the margin at 21 per BCS instructions, and Jeff Sagarin used a hybrid system based on Arpad Elo's chess ranking system using only win/loss records and a pure points system using only margin of victory. In June of 2002, the BCS announced that it was requiring all computer polls to remove any margin of victory effects from their algorithms. Matthews and Rothman declined to make the requested changes to their models, and their systems were subsequently dropped from the BCS formula and replaced by a ranking published by the New York Times. Because data for this project was gathered prior to the 2002 BCS changes, only the eight systems used by the BCS in 2001 will be compared to the results from our base model.

Because the dependent variable is the final score for a given team in a given game, the instant model is only indirectly designed to incorporate margin of victory. Where more data is provided more accurate estimation results and thus where the goal is to produce the identity of the two best football teams, use of margin of victory should be preferred over a system that only looks at the win/loss outcome. This is noted by the extensive use of margin of victory in the literature. See Bassett (1997), Bassett (1996), Wilson (1995) (capped at 15 points), Harville and Smith (1994), Stern (1992), Harville (1980) and Stefani (1977).

The concern of the BCS, however, is that rewarding teams for winning by large point differentials can result in stronger teams stacking their schedules with weaker teams and running up the score. Even for matchups between supposedly even teams, sportsmanship suggests the eventual victor in what will apparently be a lop-sided win should mitigate his opponent's loss by resting starters and letting the clock run down.[4] If

[4] I am reminded of the pained expressions on the losing players' faces in a game I officiated at the Nike World Master's Games in 1998 as they pled for me to ignore the rule to stop the clock late in one such game.

beating a weaker opponent by several touchdowns will help a team gain a BCS bowl bid, this traditional value may be trampled. The four programmers who included margin of victory in 2001 did so by reducing its importance in their algorithms and by limiting the margin itself.

Stern (1995) proposes modifying the actual margin of victory to reduce the impact of significant outliers. He suggests reducing any margin *m* greater than 20 to $20+\sqrt{(m-20)}$. His conclusions based on modelling nine NFL seasons suggest that such a modified margin exhibits improvement over results obtained without the modification.

Most of the models in the literature are based on defining the margin of victory itself as the dependent variable. A discussion on limiting margin is appropriate to such a model in that it is a restriction on the response variable itself. Application to the instant case, however, is made more difficult by the fact that each observation in the base model is independent of the opponent's score. Limiting the margin of victory for this project in the way suggested by Stern would mean either reducing the winner's score or increasing the loser's score of a game that results in too wide of a margin, thus awarding a one-time bonus to either the losing team in a lop-sided contest or indirectly to the winner's rivals.

Instead of the using actual score, Rothman uses a graded value based on the margin of victory to calculate maximum likelihood estimators. In this system, the grading value assigned to the winner of game *i*, g_{wi}, is calculated from the margin of victory *m* according to the equation

$$g_{wi} = 1 - 0.5/\left(1+e^{(1.8137993642\cdot m/15)}\right) \tag{8}$$

with the value of greater point margins increasing by smaller increments up to a limiting value of 1.000, and g_{li} assigned to the loser equal to one minus g_{wi}. Equation (8) is calculated from the CDF of the logistic distribution with standard deviation of 15. This method assigns value both to winning the game and by how much. Also, it can be applied to the data used in this project without the subjective limitation described above.

Rothman's personal observation that the base model for this particular project ignores the effect of actually winning leads to investigating the possibility of adapting the model to limit the influence of wider margins in favor of focussing on the actual winner of each game. This observation suggests that coaches are more interested in achieving a positive margin of victory than they are in the value of that margin. In addressing this issue, Stern (1995) suggests incorporating a bonus for winning a game in the input data. His conclusions show that as the magnitude of the bonus for wins increases, the importance of the scores become less and the rankings come closer to the results achieved by the human polls. As expected, those teams with several losses against high quality teams are ranked higher when scores are valued more and lower when wins are more highly regarded. As discussed in the introduction, if the goal of the system is to select teams to play in certain bowl games, the system is successful by simply accomplishing that goal. The values defined by the selection method, then, define the values of the system as a whole.

Completely eliminating the margin in the base model is accomplished easily enough by defining S_{ij} to be one if team i wins and zero if team j wins instead of using the actual scores. On the other hand, a similar adjustment could be made using Rothman's hybrid grading formula (logistic). The results using both of these methods as well as the pure scores method described in section 2 are included in the analysis.

4. Analysis

4a. Application

The commonality between the BCS rankings is limited to the 117 NCAA Division I-A teams. The data input is comprised of the final score for each team for each of the 652 games played between these teams during each week of the 2001-2002 regular

season, any applicable AP or USA Today/ESPN rating at the time of the game and the identity of the home team.[5] Scores are compiled from regular season results published in the *2001 NCAA Football Records Book* and bowl game results graciously provided by BCS computer modeler Peter Wolfe.[6].

The 2001 season was interrupted by the September 11 World Trade Center tragedy. No Division I games were played and no media rankings were updated during that week and schedules were rearranged to allow for the season to be extended into December.

Most of the BCS polls rank more than just Division I-A schools. Three rankings include Division I-AA teams and two include all NCAA divisions. The strength of schedule component of the BCS ranking system includes an allowance for losses (not wins) against non-I-A schools. Some models incorporate such games by working in an extra "team" representing the combined effect of all non-I-A schools. More information usually means more accuracy in the results. As mentioned above, the base model was initially designed with the intention of incorporating data from all NCAA games and is generally applied in such a way. Although the data used for the base model can be easily adapted to evaluate results for all four NCAA divisions, the analysis below will be restricted to the 652 games between the 117 Division I-A teams.

SAS PROC REG is used to calculate least squares estimators for O_i, D_i, h_0, C_i, AP_o, and EC_o for each week in the season and once after all games had been played. Appendix A lists the data used for all calculations, Appendix B is the SAS code used, Appendix C tabulates general ANOVA output for all models, Appendix D contains

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[5] For all games played at neutral sites, the home team is identified as the team playing geographically closest to home.

[6] Scores provided by Peter Wolfe are available online at http://www.cae.wisc.edu/~dwilson/rsfc/history/01/wolfe.html.

specific results for the most successful permutation of the base model, and Appendix E provides summarized results of all permutations compared to equivalent available results from the BCS modelers.

As a check on the results, predicted scores were calculated for each team for a hypothetical 117 X 116 round robin tournament as demonstrated in section 2. Just as the predicted scores calculated in the four team example produced an identical ranking of teams based on the round robin tournament as it did based on ordering the index values, so also were the round robin results using the full division results identical to ranking teams based on the index values.

Results for most of the models were not available until several weeks into the season. The reason for this as explained by Ken Massey is that the season does not become "connected" until mid-season. The concept of connectedness relates to avoiding singular matrices in the least squares model. After one week of play, each team has played one other team and there is no basis of comparison against any other teams. The resulting design matrix is not of full rank and a unique solution is not possible. As each week progresses and a team plays a more diversified schedule, more teams are brought into its “circle of friends”. The loop for all teams is completed – or, the system is connected – when every team in the league can be connected to every other team by a chain of common competitors. In the system involving only the 117 Division I-A teams used for this project, the system becomes connected after games completed on September 22, 2001.

Prediction accuracy is calculated weekly for all models for which data is available. These results are compared by calculating the total percentage of games for which the winner was correctly predicted by the model during the week preceding each game. These are summarized in Appendix E. Because the lack of information for some models for some weeks results in an unequal basis for comparison, a “normalized” score for these percentages is obtained by limiting the games included in this calculation to only those

weeks included in the model with the latest starting point – David Rothman's weekly information can be calculated for each week of the season, but he chose not to present results until October 11.

A ranking system is generally designed with one of two goals in mind. The model is used to either predict outcomes of future games or to report on the outcomes of games already played. What the model is used for often gives significance to the intention. If a model is intended to be predictive, or used to predict future outcomes, it is more useful as a tool for gamblers to analyze the spread of a given matchup. If, however, the model is intended to be retrodictive, or used to identify which teams have had the more impressive seasons, it is more useful in determining a champion. The latter is especially useful if the parameters of the model correlate with the values of the body awarding the championship. Stern (1995), in discussing this difference shows that information about earlier seasons can be helpful to a predictive model, but would be inappropriate in a model intended to decide a champion. David Wilson has identified the intentions for each of the eight BCS models. These intentions as specified by Mr. Wilson are also included in the comparison summary in Appendix E. Because it uses the raw scores as the dependent variable, our base model seems to be best identified as a predictive model and we can expect to see better predictive results than those identified as retrodictive models. Labeling our model as predictive, however, may suffer from the fact that no data from previous seasons is actually used.

Because the intent of the BCS system is to identify the top two teams to play in the championship game, there is some controversy regarding the intent of the models used. If retrodictive models are used, they are most likely to reward those teams who played the best over the course of the season and award the championship to the most deserving team. If predictive models are used, they will assign the teams to play in the championship who are most likely to beat all of the other teams. The distinction between the two rationales is that if a team is more likely to defeat other teams, but plays a more

difficult schedule, a combination of random factors could cause losses that suggest this team has not had as successful of a season as other teams. In particular, if two teams play each other during the regular season and end up with one loss each, the team who won their direct match should have earned the higher rank in a retrodictive system. But the loser from that game could have a higher probability of winning a rematch and could then have a higher rank in a predictive system – this is one effect of the error term in the models. Given a long enough season with enough diverse scores, the results from both styles of model should converge to the same ranking between the two teams. The BCS has attempted to compromise this issue by including a roughly equal amount of systems using each style. But when the situation described above occurs in reality, such as between Miami and Florida State in 2000 or between Colorado and Nebraska in 2001, the controversy is never really cleared up.

In addressing the distinction between predictive and retrodictive models, post-season ratings for all models are available and are used to calculate their ability to identify superior teams by applying the ratings to all games during the season and measuring the percentage of winners correctly identified. These results are then compared with the predictive ability of each system by applying the ratings to all games for each week when each game was played and measuring the percentage of winners correctly identified.

4b. Analysis

Permutations of the base model were calculated independently using the base model with only home field advantage, with conference estimators and home field advantage, with media estimators and home field advantage, and with all three estimators as represented respectively in equations (4), (5), (6) and (7). Each of these models was calculated three times modifying the dependent variable to represent raw final scores, win/loss, or the logistic approach in (8). Each of the above models was estimated for each of the fifteen weeks of the regular season and once for post-season for a total of 192 runs.

As the season progresses and more information becomes available, we can expect the model to better fit the data. We want to avoid rejecting a model based on earlier runs that later gives satisfactory results. The following analysis, therefore, is limited to only the 12 post-season runs.

ANOVA for all variations provides satisfactory p-values for the F-ratio. In all cases, the model is not rejected at any measurable confidence level. T-values given for the 2 X 116 individual school estimators reject the hypothesis that the individual estimator is equal to zero at the 95% confidence level only about 31% of the time. With so many teams included in the model and none playing more than fourteen games, it is unrealistic to expect all variables to pass this test.

We note that eight of the twelve conference variables always pass the t-test at the 99% confidence level with only two failing at the 95% confidence level. The values of these conference estimators produced an interesting result. Because the model assumes that these estimators provide a positive contribution to a given team's predicted score, it is reasonable to assume that a simple ordering of conferences based on these estimators represents a sensible measure of comparison between them. These rankings are shown in the following table.

	Actual Scores Complete Model		Actual Scores with Conferences		Win/Loss Complete Model		Win/Loss with Conferences		Logistic Complete Model		Logistic with Conferences	
Conference	**Estimate**	**Rank**	**Estimate**	**Rank**	**Estimate**	**Rank**	**Estimate**	**Rank**	**Estimate**	**Rank**	**Estimate**	**Rank**
Big 10	44.39	1	44.58	1	1.02	1	1.02	1	0.96	1	0.96	1
Big East	40.35	3	40.48	3	0.80	2	0.80	2	0.81	2	0.81	2
SEC	38.43	4	38.49	4	0.79	3	0.79	3	0.80	3	0.80	3
ACC	41.64	2	41.73	2	0.75	4	0.75	4	0.74	4	0.74	4
WAC	36.18	6	36.27	6	0.65	5	0.65	5	0.65	5	0.65	5
Pac-10	37.57	5	37.60	5	0.60	6	0.60	6	0.60	6	0.60	6
MAC	34.45	9	34.54	9	0.46	7	0.46	7	0.50	7	0.50	7
Mountain West	34.71	8	34.82	8	0.45	8	0.45	8	0.45	8	0.45	8
Independents	36.06	7	36.10	7	0.40	9	0.40	9	0.44	9	0.44	9
Big Twelve	27.82	10	27.94	10	0.39	10	0.39	10	0.41	10	0.41	10
Conference USA	25.76	11	25.82	11	0.18	11	0.18	11	0.25	11	0.25	11
Sunbelt	15.87	12	15.90	12	0.14	12	0.14	12	0.17	12	0.17	12

The numbers appearing in each estimate column represent the estimated contribution to the score that was used for the model. For instance, an estimate of 44.39 for the Big Ten in the complete model with actual scores suggests that any Big Ten team

can be expected to score at least 44 points per game based solely on the fact that they compete in the Big Ten conference. These 44 points are then adjusted by the corresponding values of any other estimators. The magnitude of the conference estimator varies according to the team used as the O_i baseline. For these models, Air Force, alphabetically, the first team, was used as the baseline team. If Miami were chosen instead, the values in the first column of the table above would all be adjusted down by 29.57 points, or the value of the O_i estimator for Miami in the original model. The values for all of the O_i estimators would also be adjusted down by this same amount. Because the important statistic we are seeking through this model is the difference between the effects of all estimators on any two teams, the magnitude of the estimators is irrelevant so long as the differences stay the same. Therefore, the arbitrary choice of Air Force as the baseline team is irrelevant. Further, an ordinal ranking of conferences based on the conference estimators is unaffected by the magnitude of the actual estimators. The large positive values shown are a result of the selection of a below average team as the baseline. Selecting Miami, Nebraska or Florida would result in the same list with values adjusted down accordingly.

An interesting result gleaned from this table is that five of the six BCS conferences appear in the top six. The Big Twelve Conference is near the bottom and the WAC is fifth. The six BCS conferences are the only conferences with overall winning non-conference records, and in fact, the Big Twelve has the second best overall non-conference record at 29-10. They had teams appearing in eight bowls including the national championship game. So, why do they appear so low in this list?

The conference estimator represents the contribution to the predicted score of a given team's participation in their conference. If we were to modify (5) to exclude the basic design matrix and home field advantage, thereby only including the conference estimators, we would end up with estimators equal to the average score for all games for teams in that conference. When conference estimators are included in the full model, the

team and media estimators individualize the effect of the conference estimator. In other words, these other estimators adjust up or down the impact for a given team of the conference estimator. A weak team in a strong conference will have negatively impacting O_i and D_i estimators to offset the effect of its conference estimator, and conversely a strong team in a weak conference will have positively impacting O_i and D_i estimators.

For example, Rutgers in the Big East had an overall record of 2-9 with both wins coming against non-conference opponents. They lost all of their Big East games by an average score of 46-5 and were clearly the weakest team in the conference. The Big East had an overall non-conference record of 25-12 with an average final score of 29-19 in their favor and are clearly one of the strongest conferences. In the model, the credit Rutgers receives for playing in the Big East is offset by the values of their other estimators. In the complete actual scores model, for example, Rutgers can be expected to score 40 points by virtue of the fact that they play in the Big East. But their average score over all games was only 11 points. Instead of adding to this 40 point Big East "gimme" as all other teams in the conference do, the large negative value of their O_i estimator actually lowers their predicted score by nearly 19 points. Their predicted score is lowered further by an average of 12.7 points based on the average value of their opponents' O_i estimators, resulting in a predicted average score of 8.8 points per game. The remaining 3 points is due to Rutgers playing 8 of their 12 games at home, plus an error term. To make matters worse, Rutgers' D_i estimator of less than 0.1 means that the 19 point deduction the Scarlet Knights take from the conference adjustment is virtually uncountered by their defense.

Conversely, a similar analysis of 10-2 Louisville, the Conference-USA champion, shows the Cardinals' estimators giving them an average 2.5 points over the Conference-USA adder of 25.8. As expected, while the estimators for Rutgers, a weak team in a strong conference, give a negative adjustment to their conference estimator, Louisville's

estimators give a positive adjustment. The magnitude of Louisville's adjustment is much less than Rutgers, but is offset by their large D_i estimator.

For conference games, the conference variable gives both teams the same contribution to the predicted score.

Because the predicted score includes offensive and defensive estimators, a low conference estimator suggests that teams in a given conference are not generally high scorers. A low estimator for a strong conference such as the Big Twelve suggests strong defenses keep down scores of games involving teams from that conference. Indeed, Big Twelve teams allowed an average of only 17.2 points per game in non-conference games, well below the average of 25.9 for all other conferences.

Comparing the conference variables in this way is perhaps a bit misleading. Because it only measures an offensive effect for teams from a given conference, it is suggested that a similar result can be achieved by eliminating the conference estimator and comparing the average of the O_i estimators. But the conference estimator is intended to isolate the impact of the offensive strength of the conference from the offensive strength of the individual school. Averaging the O_i estimators by conference using the base model results in an ordinal ranking of conferences that compares more favorably to a ranking obtained by summing the average of the O_i estimators and conference estimators in (5) than by simply ranking the conference estimators as shown below.

Average O Estimate	
Conference	Total
SEC	39.7
Big Ten	39.6
Pac-Ten	39.3
ACC	39.3
Big 12	38.4
Big East	38.3
Conference-USA	34.0
Mountain West	33.5
Mid-America	32.3
WAC	32.2
Independents	30.9
Sunbelt	27.0
Grand Total	35.8

Combined Estimators	
Conference	Total
SEC	39.9
Pac-Ten	39.5
Big 12	39.3
Big Ten	39.0
ACC	38.9
Big East	37.9
Conference-USA	35.0
Mountain West	33.4
Mid-America	31.9
WAC	31.7
Independents	29.8
Sunbelt	28.9
Grand Total	35.9

Conference Estimator	
Conference	Total
Big Ten	44.6
ACC	41.7
Big East	40.5
SEC	38.5
Pac-Ten	37.6
WAC	36.3
Independents	36.1
Mountain West	34.8
Mid-America	34.5
Big 12	27.9
Conference-USA	25.8
Sunbelt	15.9
Grand Total	34.9

A far different result is achieved when analyzing the effect of including the media polls. For variables representing both polls the hypotheses that the actual value of the estimate is zero is almost never rejected using the win/loss and logistic models with p-values greater than 50% for the actual scores model.

Less than half of all teams are ranked by these polls each week resulting in design matrix contributions of mostly zero. Only including information for a selection of teams is likely to produce a poor representation of the effect on all teams. Because the input data represented points tabulated by each poll, the actual values used varied from zero for most schools to a maximum of 1800, Miami's AP points at the end of the season. Such a wide variation would measure a large advantage to teams in the top ten while practically leaving all other teams relatively untouched. An estimate for such an effect would need to be small enough to allow for a only reasonable advantage to these top teams. The resulting estimates produce combined advantages of up to fifteen points in the actual score models, but are still not significant enough to reject the hypothesis that the estimates are actually zero. We should exclude the effect of both variables.

Built into the BCS formula are factors measuring strength of schedule (SOS) and the total number of losses. This is calculated based on 2/3 the number of wins by opponents plus 1/3 the number of wins by opponents' opponents. This calculation is a combination of the elements in a p-connectivity matrix for p=2 and p=3 as defined by Goddard (1983). The SOS score can be manipulated by playing teams more likely to have a high number of wins. Thus, scheduling an opponent from a weak conference that can be expected to win in that conference will add to a team's SOS score. The p=3 component, however, gives credit for beating teams that beat other strong teams thus giving an advantage to teams that schedule against strong opponents from weak conferences who will play against teams from even weaker conferences. Games against non-Division IA opponents do not factor into this calculation, but they do count against a team in the number of losses category. In the BCS formula, a full point is subtracted for

every loss, whether the winning team is Division IA or not. Not only does this encourage teams to avoid scheduling non-IA opponents, but it further encourages them to schedule games against weaker IA opponents.

Looking at the regular season schedule in 2001, a small majority of all non-conference games were scheduled against teams not playing in BCS member conferences. This suggests that BCS conference teams were slightly more inclined to schedule games against non-BCS conference opponents. Breaking this information down by specific conference, we find that teams from the Atlantic Coast Conference played 54% of its non-conference games against other BCS conferences and independent Notre Dame played 91% (ten of its eleven regular season games) against BCS conferences. But these were the exceptions. All other BCS conferences played an average of 64% of their non-conference games against non-BCS conference teams. It appears that the Mid-American Conference and The Western Athletic Conference were the favorite conferences for BCS conference teams to schedule against with 70.6% and 56.3% of their games against BCS conference teams respectively.

Because we are taking the team and conference variables as two large groups, it is not reasonable to include estimators for only those variables that fit the model well. We should look at each group of variables separately and either use all or none of the variables in them. Regardless of the fact that rejecting the team variables as a group means rejecting all permutations of the base model, the high percentage of variables with low p-scores suggests acceptance of the group as a whole. More convincing is the fact that conference variables are always statistically significant. We will therefore conclude that all team and conference variables should be included in the model.

Next, we will look at the "goodness of fit" for each model as measured by the coefficient of determination (R^2) for each model in Appendix C. These range from 0.7521 to 0.8887. None of these is very dramatic, but, given the variability in college football scores, they are actually surprisingly high. What is interesting is to look at the

what these R^2 scores have to say about the various permutations. First, we note that the models can be grouped in sets of three according to the method used to determine the dependent variable. Those using only win/loss as a dependent variable scored in a block either 0.7521 or 0.7522 while those using the logistic technique scored either .08262 or .8264 and those using actual scores scored either 0.8886 and 0.8887. The first block is not surprising in that those models contain the least amount of information and should have less reliable results. However, by incorporating whether a corresponding score resulted in a win in the hybrid function, we suppose to add information to the model, but the results are not as positive as those using just the actual scores. Perhaps this can be explained by looking at the transformation obtained by using the logistic formula. The formula is greater than 0.5 if the team in question wins the game and less than 0.5 if they lose. The magnitude of the value above or below 0.5 is determined by the margin. This seems to be weighted more in favor of using only the outcome as opposed to the scores and these R^2 scores seem to place the results firmly in between. If the results obtained by using only the scores are significantly more reliable than those obtained using only the outcome, a hybrid of the two should fall somewhere in between, and so it does.

The next thing we look at is how each model fared within these three blocks. We first note that the base model consistently had the lower R^2 score suggesting that there is value added by including more variables. But, because the R^2 never varies by more than .0002, we can infer that the value added by additional variables is insignificant. The lower performance of the base models is in keeping with the general theme that more information equals more accuracy. The real unknown is in the use of the media polls. As we saw above, because the conference variables are clearly significant, we would expect to see that the models using these variables outperformed those without them. What we see instead is the models using the media variables seem to perform slightly better than the base models even though the AP and ESPN variables are clearly not significant. Because they still offer more information they can be expected to improve the results over

a model that does not use them. But the improvement is miniscule and at a cost of greater complication.

Comparing the ordinal results and actual estimators for each team between the four models used with each type of data format, we see there is very little deviation. A final ranking obtained using actual scores with the base model looks remarkably like the final ranking obtained using actual scores and including conference variables. Likewise for any of our other models. It would appear that once the base model is defined and a method of scoring is decided upon, the resulting estimators are not likely to be significantly enhanced by including additional information.

4C. BCS Comparison

The above statistical analysis is not, of course, available for the BCS models we wish to compare the base model against. Under these conditions, Stern (1995) proposes using the predictive ability of each model as the principal method of evaluation. Prediction and retrodiction results are summarized for each permutation of the base model previously discussed and for each of the eight BCS models in Appendix E. In each case, the final ratings were applied as a predictor of the winner for each game played during the year for retrodictive results and available ratings for each week of the season were applied to games immediately following posting of the results for predictive results. The predictive results were then normalized by calculating an accuracy percentage only for those weeks for which all models were available.

Retrodictive results for each of our models fall in line with expectations formed by the previous analysis with few exceptions. As seen in our R^2 analysis, the only variation among the various models is based on the type of data used. In fact, predictions within each of the three groups always varied by exactly one game decided by two or three points. The best retrodictive results were achieved using the win/loss record without

regard to scores. But, this system was only able to correctly identify the winner of one game more than the logistic models.

The BCS models ranged between 80.3% and 83.7%. All of our twelve models fell within this range.

Normalized predictive results failed to follow a similar pattern. The percentages for this approach were on average 12% lower than for the retrodictive results. As the season progresses and more information is available for each team, the model is expected to be more reliable. Predictions made early in the season should therefore be less accurate than those made after all games have been played. Because the retrodictive results are based on information from all games played during the year, it should be more reliable than results based on information available during any previous week.

What is surprising about the predictive results is that the models with the best performance are not the same as those that performed best in the retrodictive results. In the predictive results, the models based on the actual scores clearly outperform those based on the logistic formula which in turn are clearly better predictors than those using only win/loss. Early in the season when fewer data points are available, the additional information available to the models incorporating actual scores becomes significant. As the season progresses, however, the win/loss records provide more valuable information and the models using this information become more accurate.

Assuming each team has an equal chance of winning each game, the win/loss records of all teams are theoretically based on a binomial distribution. After three weeks, for example, the actual distribution of records includes 42 undefeated teams, 41 unwinning teams, 3 teams that haven't played any games yet and 31 with a combination of wins and losses. Basing a ranking only on wins and losses means distributing the 42 undefeated teams according to the records of the teams they have beaten and the 41 unwinning teams according to the records of the teams that have beaten them. The lack of data is likely to result in a very inaccurate ranking. By the end of the season, however,

teams have played enough games that overall records are arguably sufficient to determine accurate rankings.

Models based on win/loss, therefore, are likely to show a more exaggerated increase in predictive accuracy as the season progresses than are those models based on actual scores. This explains why we see that the more the model relies on actual scores and less on win/loss, the better the predictive results.

The predictive results are also more in line with what can be expected based on analysis of the goodness of fit. The difference from the retrodictive results are likely based on the fact that looking at a percentage of games accurately predicted provides the same result whether the final scores are always 1-0 as assumed by the win/loss model or provide varied results as they actually do. Looking at goodness of fit, we are concerned with how well the independent variable compare with the predicted results. On the other hand, looking at percentage accuracy, we are only concerned with the sign and not value of the margin of victory. Thus, if the model is based on actual scores and results in a fairly high goodness of fit, it is more likely to accurately predict the winner of a mismatched game, but less likely to predict the winner of a close game. Because with only 11 or 12 games played per team, the binomial distribution bunches so many teams with similar records in the middle of the pack, goodness of fit relative to a model based only on win/loss records is not likely to be as high as that for a model that only uses actual scores.

What this analysis fails to do, and does not attempt to do, is to explain why the predictive results from the Rothman system using the logistic formula dramatically outperformed all other models in the study. Because retrodictively, the results from the Rothman system - identified by Wilson as a retrodictive system - fall at the bottom of all BCS models these predictive results are assumed to be anomalous as discussed below.

The normalized percentages for the predictive models ranged from 67.3% to 72.3%. The range for the BCS models was between 66.2% and 88.3%. If David

Rothman's score is excluded, the best percentage for the BCS models is 70.9%, which is lower than any of our actual scores models performed.

The Rothman iterative MLE model was 88.3% accurate on a weekly basis, but retrodictively was only 80.3% accurate. As the only model to perform better on a predictive basis than retrodictive, and more than 17% better than any other model, we should question the results as a significant outlier. David Rothman makes the code used for his model readily available. Running this code using the same 3681 game data used by Mr. Rothman does not exactly reproduce his results. The variance, however, can be explained by the fact that Mr. Rothman begins with an adjustment for the ten NESCAC teams to better incorporate their closed system into the ratings. The predictive results without this adjustment vary mostly by a small constant factor and the order difference caused by the magnitude variation in the NESCAC teams. None of this variance changes the final predictive accuracy for any of the 652 Division I-A games used in the comparison.

5. Conclusion

Using computer models to rank college football teams is a common practice. David Wilson of the University of Wisconsin maintains an internet site that is widely considered the internet focal point for information about college football ranking systems. Included among the 96 systems linked from this site are the eight models participating in the BCS in 2001, the one addition for 2002, and a host of other lists compiled based on the information available to and the values held by each of the participating modelers.

This paper has presented the theory behind and results from one of these systems based on least squares analysis. The success of this system, as measured by predicting and retrodicting accuracy measured favorably against similar results derived by the models used to determine the BCS champion. The most successful of the methods

employed herein in terms of statistical significance and prediction accuracy involved a combination of all factors discussed using a dependent variable based on the actual scores from each game. Introducing parameters to measure the impact of media ratings on actual scores correctly predicted the result in slightly fewer games than did the models excluding this factor. Because this factor was included in the combined "best" model, it would perhaps be of greater benefit to calculate the same model without this media term. Also, because the addition of conference estimators did little to enhance the accuracy of the model, we conclude that the most productive model uses only basic offensive and defensive estimators and a home field advantage.

The analysis above suggests that the margin of victory can be important as an aid to accurately discriminating between college football teams. Although the results achieved by the BCS models that did not include point margins would also be evident of the validity of such models, the best performance on a predictive basis came from a model that does use the margin as a factor.

All models researched whether included within this paper or not chose the same team, Miami, as the top performer in 2001 – an uncontested number one. The real question that plagued the field in 2001 was not who was number one, but who was number two. An analysis performed by BCS modeler Ken Massey offers the consensus choice for number two by the 72 models he compared as Florida.

The BCS formula selected Nebraska to play in the Rose Bowl as the number two team. Six of the eight computers selected Nebraska in the second position. Among the twelve permutations of our base model at the end of the regular season each of the models using actual scores picked Florida, the win/loss models chose Oregon and the logistic models selected Nebraska. The results given in this project, therefore, only agree with the choice of teams designated to play for the BCS championship when using the logistic method.

The BCS formula is designed to select two teams to play for a national title based on specific criteria. In 2002, the values of the designers that are biased against the use of point margins have caused another change in calculation method. Whatever method that is used to determine who these two teams are must be the best method for making such a choice so long as the rules are followed. There is no guarantee that the two teams selected are the "best" teams, but they are guaranteed to be the two teams meeting the necessary criteria given by the rules of the competition.

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Appendix A – Input Data

Date	Wcode	Wscore	Lcode	Lscore	Home	WAP	WESPN	LAP	LESPN	Game
23Aug01	LOUISVILLE	45	NEW MEXICO ST.	24	LOUISVILLE	53	51	0	0	1
25Aug01	BRIGHAM YOUNG	70	TULANE	35	BRIGHAM YOUNG	0	14	0	0	2
25Aug01	NEBRASKA	21	TCU	7	NEBRASKA	1525	1292	7	27	3
25Aug01	OKLAHOMA	41	NORTH CAROLINA	27	OKLAHOMA	1588	1314	0	1	4
25Aug01	WISCONSIN	26	VIRGINIA	17	WISCONSIN	237	204	0	0	5
26Aug01	FRESNO ST.	24	COLORADO	22	COLORADO	6	15	5	92	6
26Aug01	GEORGIA TECH	13	SYRACUSE	7	SYRACUSE	1005	706	1	1	7
30Aug01	AKRON	31	OHIO U.	29	AKRON	0	0	0	0	8
30Aug01	ARIZONA	23	SAN DIEGO ST.	10	SAN DIEGO ST.	0	0	0	0	9
30Aug01	ARKANSAS	14	UNLV	10	ARKANSAS	21	7	12	12	10
30Aug01	MIDDLE TENN.	37	VANDERBILT	28	VANDERBILT	0	0	0	0	11
30Aug01	NORTHERN ILLINOIS	20	SOUTH FLORIDA	17	NORTHERN ILLINOIS	0	0	0	0	12
30Aug01	RUTGERS	31	BUFFALO	15	BUFFALO	0	0	0	0	13
30Aug01	TEMPLE	45	NAVY	26	TEMPLE	0	0	0	0	14
30Aug01	TOLEDO	38	MINNESOTA	7	TOLEDO	1	7	0	9	15
30Aug01	WASHINGTON ST.	36	IDAHO	7	IDAHO	14	0	0	0	16
01Sep01	AUBURN	30	BALL ST.	0	AUBURN	6	93	0	0	17
01Sep01	BOSTON COLLEGE	34	WEST VIRGINIA	10	BOSTON COLLEGE	0	0	2	3	18
01Sep01	BOWLING GREEN	20	MISSOURI	13	MISSOURI	0	0	0	0	19
01Sep01	BRIGHAM YOUNG	52	NEVADA	7	BRIGHAM YOUNG	13	14	0	0	20
01Sep01	CLEMSON	21	CENTRAL FLORIDA	13	CLEMSON	568	503	0	0	21
01Sep01	COLORADO	41	COLORADO ST.	14	COLORADO ST.	2	92	170	168	22
01Sep01	FLORIDA	49	MARSHALL	14	FLORIDA	1723	1401	10	23	23
01Sep01	FLORIDA ST.	55	DUKE	13	DUKE	1452	1249	0	1	24
01Sep01	GEORGIA	45	ARKANSAS ST.	17	GEORGIA	100	9	0	0	25
01Sep01	ILLINOIS	44	CALIFORNIA	17	CALIFORNIA	21	8	0	0	26
01Sep01	IOWA	51	KENT ST.	0	IOWA	0	0	0	0	27
01Sep01	LOUISIANA TECH	36	SMU	6	LOUISIANA TECH	0	0	0	0	28
01Sep01	LOUISVILLE	36	KENTUCKY	10	KENTUCKY	54	51	0	0	29
01Sep01	LSU	48	TULANE	17	LSU	780	515	0	0	30
01Sep01	MARYLAND	23	NORTH CAROLINA	7	MARYLAND	0	0	0	1	31
01Sep01	MIAMI, FLORIDA	33	PENN ST.	7	PENN ST.	1710	1349	9	31	32
01Sep01	MICHIGAN	31	MIAMI, OHIO	13	MICHIGAN	926	856	0	0	33
01Sep01	NEBRASKA	42	TROY ST.	14	NEBRASKA	1472	1292	0	0	34
01Sep01	NEW MEXICO	26	UTEP	6	NEW MEXICO	0	0	0	4	35
01Sep01	OKLAHOMA	44	AIR FORCE	3	AIR FORCE	1610	1314	0	1	36
01Sep01	OREGON	31	WISCONSIN	28	OREGON	1367	1038	257	204	37
01Sep01	RICE	21	HOUSTON	14	HOUSTON	0	0	0	0	38
01Sep01	SOUTH CAROLINA	32	BOISE ST.	13	SOUTH CAROLINA	367	258	0	0	39
01Sep01	SOUTHERN MISS.	17	OKLAHOMA ST.	9	SOUTHERN MISS.	11	19	0	0	40
01Sep01	TCU	19	NORTH TEXAS	5	NORTH TEXAS	0	27	0	0	41
01Sep01	TENNESSEE	33	SYRACUSE	9	TENNESSEE	1347	1042	0	1	42
01Sep01	TEXAS	41	NEW MEXICO ST.	7	TEXAS	1467	1164	0	0	43
01Sep01	UCLA	20	ALABAMA	17	ALABAMA	641	547	131	131	44
01Sep01	USC	21	SAN JOSE ST.	10	USC	72	41	0	0	45
01Sep01	UTAH	23	UTAH ST.	19	UTAH	0	0	0	0	46
01Sep01	VIRGINIA TECH	52	CONNECTICUT	10	VIRGINIA TECH	1164	899	0	0	47
01Sep01	WAKE FOREST	21	EAST CAROLINA	19	EAST CAROLINA	0	0	61	59	48
02Sep01	FRESNO ST.	44	OREGON ST.	24	FRESNO ST.	35	15	1024	796	49
02Sep01	PURDUE	19	CINCINNATI	14	CINCINNATI	129	20	0	0	50
03Sep01	MISSISSIPPI ST.	30	MEMPHIS	10	MISSISSIPPI ST.	571	489	0	0	51
06Sep01	NORTH CAROLINA ST.	35	INDIANA	14	NORTH CAROLINA ST.	0	21	1	0	52
06Sep01	TEXAS A & M	28	WYOMING	20	WYOMING	8	19	0	0	53
07Sep01	NORTHWESTERN	37	UNLV	28	UNLV	674	365	0	0	54
08Sep01	ALABAMA	12	VANDERBILT	9	VANDERBILT	20	19	0	0	55
08Sep01	ARIZONA	36	IDAHO	29	ARIZONA	0	0	0	0	56
08Sep01	ARIZONA ST.	38	SAN DIEGO ST.	7	ARIZONA ST.	1	0	0	0	57
08Sep01	AUBURN	27	MISSISSIPPI	21	AUBURN	4	62	6	8	58
08Sep01	BAYLOR	24	ARKANSAS ST.	3	BAYLOR	0	0	0	0	59
08Sep01	BOWLING GREEN	35	BUFFALO	0	BOWLING GREEN	0	0	0	0	60
08Sep01	BRIGHAM YOUNG	44	CALIFORNIA	16	CALIFORNIA	37	41	0	0	61
08Sep01	CINCINNATI	24	ARMY	21	ARMY	0	0	0	0	62
08Sep01	COLORADO	51	SAN JOSE ST.	15	COLORADO	8	13	0	0	63
08Sep01	COLORADO ST.	35	NEVADA	18	COLORADO ST.	10	4	0	0	64
08Sep01	EAST CAROLINA	51	TULANE	24	TULANE	11	11	0	0	65
08Sep01	FLORIDA	55	LOUISIANA-MONROE	6	FLORIDA	1721	1439	0	0	66
08Sep01	FLORIDA ST.	29	UAB	7	FLORIDA ST.	1458	1244	0	0	67
08Sep01	FRESNO ST.	32	WISCONSIN	20	WISCONSIN	554	33	208	132	68
08Sep01	GEORGIA TECH	70	NAVY	7	NAVY	988	684	0	0	69
08Sep01	ILLINOIS	17	NORTHERN ILLINOIS	12	ILLINOIS	36	23	0	0	70
08Sep01	IOWA	44	MIAMI, OHIO	19	IOWA	0	1	0	0	71
08Sep01	KANSAS ST.	10	USC	6	USC	943	850	71	53	72
08Sep01	KENTUCKY	28	BALL ST.	20	KENTUCKY	0	0	0	0	73
08Sep01	LSU	31	UTAH ST.	14	LSU	861	594	0	0	74

Date	Wcode	Wscore	Lcode	Lscore	Home	WAP	WESPN	LAP	LESPN	Game
08Sep01	MARYLAND	50	EASTERN MICH.	3	MARYLAND	0	6	0	0	75
08Sep01	MIAMI, FLORIDA	61	RUTGERS	0	MIAMI, FLORIDA	1737	1423	0	0	76
08Sep01	MICHIGAN ST.	35	CENTRAL MICHIGAN	21	MICHIGAN ST.	25	19	0	0	77
08Sep01	MIDDLE TENN.	54	TROY ST.	17	MIDDLE TENN.	0	0	0	0	78
08Sep01	MINNESOTA	44	LA-LAFAYETTE	14	MINNESOTA	0	0	0	0	79
08Sep01	NEBRASKA	27	NOTRE DAME	10	NEBRASKA	1474	1248	604	527	80
08Sep01	OHIO ST.	28	AKRON	14	OHIO ST.	189	260	0	0	81
08Sep01	OKLAHOMA	37	NORTH TEXAS	10	OKLAHOMA	1633	1370	0	0	82
08Sep01	OKLAHOMA ST.	30	LOUISIANA TECH	23	OKLAHOMA ST.	0	13	0	0	83
08Sep01	OREGON	24	UTAH	10	OREGON	1357	1083	0	0	84
08Sep01	OREGON ST.	27	NEW MEXICO ST.	22	NEW MEXICO ST.	293	826	0	0	85
08Sep01	RICE	15	DUKE	13	RICE	0	0	0	0	86
08Sep01	SOUTH CAROLINA	14	GEORGIA	9	GEORGIA	422	285	129	105	87
08Sep01	SOUTH FLORIDA	35	PITTSBURGH	26	PITTSBURGH	0	0	0	24	88
08Sep01	STANFORD	38	BOSTON COLLEGE	22	STANFORD	9	7	4	12	89
08Sep01	SYRACUSE	21	CENTRAL FLORIDA	10	SYRACUSE	0	0	0	0	90
08Sep01	TCU	38	SMU	10	SMU	0	12	0	0	91
08Sep01	TENNESSEE	13	ARKANSAS	3	ARKANSAS	1355	1090	2	8	92
08Sep01	TEXAS	44	NORTH CAROLINA	14	TEXAS	1482	1184	0	0	93
08Sep01	TEXAS TECH	42	NEW MEXICO	30	TEXAS TECH	0	3	0	0	94
08Sep01	TOLEDO	33	TEMPLE	7	TEMPLE	25	40	0	0	95
08Sep01	UCLA	41	KANSAS	17	KANSAS	809	676	0	0	96
08Sep01	VIRGINIA TECH	31	WESTERN MICH.	0	VIRGINIA TECH	1200	985	2	6	97
08Sep01	WASHINGTON	23	MICHIGAN	18	WASHINGTON	728	632	963	879	98
08Sep01	WASHINGTON ST.	41	BOISE ST.	20	BOISE ST.	0	0	0	0	99
08Sep01	WEST VIRGINIA	20	OHIO U.	3	WEST VIRGINIA	0	0	0	0	100
20Sep01	NEBRASKA	48	RICE	3	NEBRASKA	1521	1288	0	0	101
20Sep01	SOUTH CAROLINA	16	MISSISSIPPI ST.	14	MISSISSIPPI ST.	580	413	615	513	102
22Sep01	ALABAMA	31	ARKANSAS	10	ALABAMA	7	2	0	3	103
22Sep01	ARIZONA	38	UNLV	21	ARIZONA	0	0	0	0	104
22Sep01	BAYLOR	16	NEW MEXICO	13	BAYLOR	0	0	0	0	105
22Sep01	BOISE ST.	42	UTEP	17	BOISE ST.	0	0	0	0	106
22Sep01	BOSTON COLLEGE	38	NAVY	21	NAVY	0	0	0	0	107
22Sep01	BOWLING GREEN	42	TEMPLE	23	BOWLING GREEN	0	0	0	0	108
22Sep01	BUFFALO	37	CONNECTICUT	20	CONNECTICUT	0	0	0	0	109
22Sep01	CENTRAL FLORIDA	36	TULANE	29	TULANE	0	0	0	0	110
22Sep01	COLORADO	27	KANSAS	16	COLORADO	49	15	0	0	111
22Sep01	FLORIDA	44	KENTUCKY	10	KENTUCKY	1715	1427	0	0	112
22Sep01	FRESNO ST.	37	TULSA	18	TULSA	973	619	0	0	113
22Sep01	ILLINOIS	34	LOUISVILLE	10	ILLINOIS	15	19	129	111	114
22Sep01	IOWA ST.	31	OHIO U.	28	OHIO U.	0	1	0	0	115
22Sep01	KANSAS ST.	64	NEW MEXICO ST.	0	KANSAS ST.	970	899	0	0	116
22Sep01	MARYLAND	27	WAKE FOREST	20	WAKE FOREST	11	5	0	0	117
22Sep01	MEMPHIS	17	SOUTH FLORIDA	9	MEMPHIS	0	0	0	0	118
22Sep01	MIAMI, OHIO	21	CINCINNATI	14	MIAMI, OHIO	0	0	0	0	119
22Sep01	MICHIGAN	38	WESTERN MICH.	21	MICHIGAN	510	466	0	0	120
22Sep01	MICHIGAN ST.	17	NOTRE DAME	10	NOTRE DAME	30	22	211	150	121
22Sep01	MIDDLE TENN.	38	LOUISIANA-MONROE	20	LOUISIANA-MONROE	0	0	0	0	122
22Sep01	NEVADA	28	HAWAII	20	NEVADA	0	0	0	0	123
22Sep01	NORTH CAROLINA	41	FLORIDA ST.	9	NORTH CAROLINA	0	0	1426	1232	124
22Sep01	NORTH CAROLINA ST.	26	SMU	17	SMU	11	35	0	0	125
22Sep01	NORTHWESTERN	44	DUKE	7	DUKE	676	425	0	0	126
22Sep01	OREGON	24	USC	22	OREGON	1294	1078	9	6	127
22Sep01	PURDUE	33	AKRON	14	PURDUE	98	117	0	0	128
22Sep01	SAN DIEGO ST.	14	COLORADO ST.	7	COLORADO ST.	0	0	0	1	129
22Sep01	SOUTHERN MISS.	35	LA-LAFAYETTE	10	LA-LAFAYETTE	11	9	0	0	130
22Sep01	STANFORD	51	ARIZONA ST.	28	STANFORD	16	21	3	0	131
22Sep01	SYRACUSE	31	AUBURN	14	SYRACUSE	0	0	46	93	132
22Sep01	TEXAS	53	HOUSTON	26	HOUSTON	1490	1204	0	0	133
22Sep01	TEXAS A & M	21	OKLAHOMA ST.	7	TEXAS A & M	8	21	0	0	134
22Sep01	TEXAS TECH	42	NORTH TEXAS	14	TEXAS TECH	0	2	0	0	135
22Sep01	TOLEDO	52	CENTRAL MICHIGAN	28	CENTRAL MICHIGAN	87	46	0	0	136
22Sep01	UAB	55	ARMY	3	UAB	0	0	0	0	137
22Sep01	UCLA	13	OHIO ST.	6	UCLA	895	806	258	307	138
22Sep01	UTAH	28	INDIANA	26	INDIANA	0	0	0	0	139
22Sep01	VIRGINIA	26	CLEMSON	24	CLEMSON	0	0	536	452	140
22Sep01	VIRGINIA TECH	50	RUTGERS	0	RUTGERS	1227	1039	0	0	141
22Sep01	WASHINGTON	53	IDAHO	3	WASHINGTON	947	793	0	0	142
22Sep01	WASHINGTON ST.	51	CALIFORNIA	20	WASHINGTON ST.	4	0	0	0	143
22Sep01	WEST VIRGINIA	34	KENT ST.	14	WEST VIRGINIA	0	0	0	0	144
22Sep01	WISCONSIN	18	PENN ST.	6	PENN ST.	19	6	0	0	145
22Sep01	WYOMING	43	UTAH ST.	42	UTAH ST.	0	0	0	0	146
27Sep01	MIAMI, FLORIDA	43	PITTSBURGH	21	PITTSBURGH	1749	1453	0	4	147
29Sep01	AIR FORCE	45	SAN DIEGO ST.	21	SAN DIEGO ST.	0	0	0	0	148

Date	Wcode	Wscore	Lcode	Lscore	Home	WAP	WESPN	LAP	LESPN	Game
06Oct01	MEMPHIS	22	SOUTHERN MISS.	17	MEMPHIS	0	0	9	15	223
06Oct01	MIAMI, FLORIDA	38	TROY ST.	7	MIAMI, FLORIDA	1744	1458	0	0	224
06Oct01	MIAMI, OHIO	31	BUFFALO	14	MIAMI, OHIO	0	0	0	0	225
06Oct01	MICHIGAN	20	PENN ST.	0	PENN ST.	803	682	0	0	226
06Oct01	MIDDLE TENN.	70	IDAHO	58	MIDDLE TENN.	0	0	0	0	227
06Oct01	MISSISSIPPI	35	ARKANSAS ST.	17	ARKANSAS ST.	0	0	0	0	228
06Oct01	MISSOURI	41	OKLAHOMA ST.	38	OKLAHOMA ST.	0	0	0	0	229
06Oct01	NEBRASKA	48	IOWA ST.	14	NEBRASKA	1546	1315	0	11	230
06Oct01	NEW MEXICO	30	WYOMING	29	WYOMING	0	0	0	0	231
06Oct01	NEW MEXICO ST.	24	TULSA	7	TULSA	0	0	0	0	232
06Oct01	NORTH CAROLINA	24	EAST CAROLINA	21	NORTH CAROLINA	11	5	0	0	233
06Oct01	NORTH CAROLINA ST.	17	WAKE FOREST	14	WAKE FOREST	0	5	0	0	234
06Oct01	NOTRE DAME	24	PITTSBURGH	7	NOTRE DAME	0	0	0	0	235
06Oct01	OHIO ST.	38	NORTHWESTERN	20	OHIO ST.	74	61	884	674	236
06Oct01	OKLAHOMA	14	TEXAS	3	TEXAS	1648	1370	1511	1263	237
06Oct01	OREGON	63	ARIZONA	28	ARIZONA	1310	1108	2	1	238
06Oct01	PURDUE	23	IOWA	14	PURDUE	321	395	24	63	239
06Oct01	RICE	45	BOISE ST.	14	RICE	0	0	0	0	240
06Oct01	SOUTH CAROLINA	42	KENTUCKY	6	SOUTH CAROLINA	952	757	0	0	241
06Oct01	SYRACUSE	24	RUTGERS	17	RUTGERS	3	5	0	0	242
06Oct01	TEXAS A & M	16	BAYLOR	10	TEXAS A & M	182	245	0	0	243
06Oct01	TOLEDO	48	OHIO U.	41	OHIO U.	200	157	0	0	244
06Oct01	UNLV	27	NEVADA	12	NEVADA	0	0	0	0	245
06Oct01	UTAH	52	SOUTH FLORIDA	21	UTAH	0	0	0	0	246
06Oct01	VIRGINIA TECH	35	WEST VIRGINIA	0	WEST VIRGINIA	1308	1128	0	0	247
06Oct01	WASHINGTON	27	USC	24	WASHINGTON	1006	924	0	0	248
06Oct01	WASHINGTON ST.	34	OREGON ST.	27	WASHINGTON ST.	68	20	11	21	249
06Oct01	WESTERN MICH.	31	AKRON	14	WESTERN MICH.	0	0	0	0	250
11Oct01	MARYLAND	20	GEORGIA TECH	17	GEORGIA TECH	360	298	670	618	251
13Oct01	AIR FORCE	24	WYOMING	13	AIR FORCE	0	0	0	0	252
13Oct01	ARKANSAS	10	SOUTH CAROLINA	7	ARKANSAS	0	0	1160	930	253
13Oct01	ARKANSAS ST.	26	LA-LAFAYETTE	20	ARKANSAS ST.	0	0	0	0	254
13Oct01	AUBURN	23	FLORIDA	20	AUBURN	3	18	1739	1445	255
13Oct01	BALL ST.	35	EASTERN MICH.	14	EASTERN MICH.	0	0	0	0	256
13Oct01	BOISE ST.	41	TULSA	10	BOISE ST.	0	0	0	0	257
13Oct01	BRIGHAM YOUNG	24	NEW MEXICO	20	NEW MEXICO	480	515	0	0	258
13Oct01	CINCINNATI	31	UAB	17	UAB	0	0	0	0	259
13Oct01	CLEMSON	45	NORTH CAROLINA ST.	37	NORTH CAROLINA ST.	529	388	0	6	260
13Oct01	COLORADO	31	TEXAS A & M	21	COLORADO	439	164	203	329	261
13Oct01	EAST CAROLINA	49	ARMY	26	ARMY	0	0	0	0	262
13Oct01	FRESNO ST.	25	COLORADO ST.	22	COLORADO ST.	1240	927	0	0	263
13Oct01	GEORGIA	30	VANDERBILT	14	VANDERBILT	443	151	0	0	264
13Oct01	HAWAII	66	UTEP	7	HAWAII	0	0	0	0	265
13Oct01	ILLINOIS	35	INDIANA	14	INDIANA	29	39	0	0	266
13Oct01	IOWA ST.	20	MISSOURI	14	MISSOURI	0	0	0	0	267
13Oct01	KENT ST.	44	NORTHERN ILLINOIS	34	KENT ST.	0	0	0	0	268
13Oct01	LOUISIANA TECH	45	NEVADA	42	NEVADA	0	0	0	0	269
13Oct01	LSU	29	KENTUCKY	25	KENTUCKY	49	46	0	0	270
13Oct01	MARSHALL	34	BUFFALO	14	BUFFALO	0	17	0	0	271
13Oct01	MEMPHIS	52	HOUSTON	33	HOUSTON	0	0	0	0	272
13Oct01	MIAMI, FLORIDA	49	FLORIDA ST.	27	FLORIDA ST.	1719	1449	756	759	273
13Oct01	MIAMI, OHIO	30	AKRON	27	MIAMI, OHIO	0	0	0	0	274
13Oct01	MICHIGAN	24	PURDUE	10	MICHIGAN	978	812	509	548	275
13Oct01	MICHIGAN ST.	31	IOWA	28	MICHIGAN ST.	43	19	0	2	276
13Oct01	MISSISSIPPI	27	ALABAMA	24	MISSISSIPPI	0	0	7	5	277
13Oct01	NEBRASKA	48	BAYLOR	7	BAYLOR	1577	1325	0	0	278
13Oct01	NEW MEXICO ST.	46	IDAHO	39	NEW MEXICO ST.	0	0	0	0	279
13Oct01	NORTH CAROLINA	30	VIRGINIA	24	NORTH CAROLINA	11	2	0	0	280
13Oct01	NORTH TEXAS	24	MIDDLE TENN.	21	NORTH TEXAS	0	0	0	0	281
13Oct01	NORTHWESTERN	23	MINNESOTA	17	NORTHWESTERN	192	177	0	0	282
13Oct01	NOTRE DAME	34	WEST VIRGINIA	24	NOTRE DAME	0	0	0	0	283
13Oct01	OHIO U.	34	CENTRAL MICHIGAN	3	CENTRAL MICHIGAN	0	0	0	0	284
13Oct01	OKLAHOMA	38	KANSAS	10	KANSAS	1700	1397	0	0	285
13Oct01	OREGON	48	CALIFORNIA	7	CALIFORNIA	1437	1184	0	0	286
13Oct01	OREGON ST.	38	ARIZONA	3	OREGON ST.	0	15	0	0	287
13Oct01	RICE	21	NAVY	13	NAVY	0	0	0	0	288
13Oct01	SMU	24	SAN JOSE ST.	17	SAN JOSE ST.	0	0	0	0	289
13Oct01	SOUTH FLORIDA	40	CONNECTICUT	21	SOUTH FLORIDA	0	0	0	0	290
13Oct01	SYRACUSE	42	PITTSBURGH	10	PITTSBURGH	0	5	0	0	291
13Oct01	TEMPLE	30	RUTGERS	5	TEMPLE	0	0	0	0	292
13Oct01	TEXAS	45	OKLAHOMA ST.	17	OKLAHOMA ST.	1128	906	0	0	293
13Oct01	TEXAS TECH	38	KANSAS ST.	19	TEXAS TECH	0	0	247	215	294
13Oct01	TROY ST.	21	MISSISSIPPI ST.	9	MISSISSIPPI ST.	0	0	0	1	295
13Oct01	TULANE	48	TCU	22	TULANE	0	0	0	0	296

Date	Wcode	Wscore	Lcode	Lscore	Home	WAP	WESPN	LAP	LESPN	Game
13Oct01	UCLA	35	WASHINGTON	13	UCLA	1369	1131	1148	1061	297
13Oct01	UNLV	31	SAN DIEGO ST.	3	UNLV	0	0	0	0	298
13Oct01	USC	48	ARIZONA ST.	17	USC	0	0	5	0	299
13Oct01	VIRGINIA TECH	34	BOSTON COLLEGE	20	VIRGINIA TECH	1421	1225	0	2	300
13Oct01	WAKE FOREST	42	DUKE	35	DUKE	0	0	0	0	301
13Oct01	WASHINGTON ST.	45	STANFORD	39	STANFORD	172	124	299	210	302
13Oct01	WESTERN MICH.	37	BOWLING GREEN	28	WESTERN MICH.	0	0	0	0	303
13Oct01	WISCONSIN	20	OHIO ST.	17	OHIO ST.	5	0	381	171	304
16Oct01	LOUISVILLE	24	SOUTHERN MISS.	14	LOUISVILLE	2	18	0	9	305
19Oct01	BOISE ST.	35	FRESNO ST.	30	FRESNO ST.	0	0	1280	979	306
20Oct01	ARIZONA ST.	41	OREGON ST.	24	ARIZONA ST.	5	0	0	19	307
20Oct01	AUBURN	48	LOUISIANA TECH	41	AUBURN	568	300	0	0	308
20Oct01	BALL ST.	24	TOLEDO	20	BALL ST.	0	0	183	249	309
20Oct01	BOSTON COLLEGE	45	PITTSBURGH	7	BOSTON COLLEGE	0	0	0	0	310
20Oct01	BOWLING GREEN	16	AKRON	11	AKRON	0	0	0	0	311
20Oct01	BRIGHAM YOUNG	63	AIR FORCE	33	BRIGHAM YOUNG	599	697	1	1	312
20Oct01	CENTRAL FLORIDA	38	LOUISIANA-MONROE	6	CENTRAL FLORIDA	0	0	0	0	313
20Oct01	CINCINNATI	29	HOUSTON	28	HOUSTON	0	0	0	0	314
20Oct01	COLORADO ST.	26	UNLV	24	UNLV	0	0	0	0	315
20Oct01	EAST CAROLINA	32	MEMPHIS	11	EAST CAROLINA	0	0	0	0	316
20Oct01	FLORIDA ST.	43	VIRGINIA	7	VIRGINIA	285	297	0	0	317
20Oct01	GEORGIA	43	KENTUCKY	29	GEORGIA	669	338	0	0	318
20Oct01	GEORGIA TECH	27	NORTH CAROLINA ST.	17	GEORGIA TECH	234	161	0	0	319
20Oct01	HAWAII	36	TULSA	15	TULSA	0	0	0	0	320
20Oct01	ILLINOIS	42	WISCONSIN	35	ILLINOIS	105	126	10	7	321
20Oct01	IOWA	42	INDIANA	28	IOWA	0	0	0	0	322
20Oct01	IOWA ST.	28	OKLAHOMA ST.	14	IOWA ST.	0	1	0	0	323
20Oct01	KENT ST.	35	BUFFALO	13	KENT ST.	0	0	0	0	324
20Oct01	LA-LAFAYETTE	54	IDAHO	37	IDAHO	0	0	0	0	325
20Oct01	LSU	42	MISSISSIPPI ST.	0	MISSISSIPPI ST.	23	46	0	0	326
20Oct01	MARSHALL	42	CENTRAL MICHIGAN	21	MARSHALL	0	21	0	0	327
20Oct01	MARYLAND	59	DUKE	17	MARYLAND	832	690	0	0	328
20Oct01	MIAMI, OHIO	36	OHIO U.	24	OHIO U.	0	0	0	0	329
20Oct01	MINNESOTA	28	MICHIGAN ST.	19	MINNESOTA	0	0	103	83	330
20Oct01	MISSISSIPPI	45	MIDDLE TENN.	17	MISSISSIPPI	30	6	0	0	331
20Oct01	MISSOURI	38	KANSAS	34	KANSAS	0	0	0	0	332
20Oct01	NEBRASKA	41	TEXAS TECH	31	NEBRASKA	1631	1382	0	0	333
20Oct01	NORTH CAROLINA	38	CLEMSON	3	CLEMSON	22	5	747	636	334
20Oct01	NORTH TEXAS	45	ARKANSAS ST.	0	NORTH TEXAS	0	0	0	0	335
20Oct01	NORTHERN ILLINOIS	20	WESTERN MICH.	12	NORTHERN ILLINOIS	0	0	0	0	336
20Oct01	NOTRE DAME	27	USC	16	NOTRE DAME	0	0	0	0	337
20Oct01	OHIO ST.	27	SAN DIEGO ST.	12	OHIO ST.	28	15	0	0	338
20Oct01	OKLAHOMA	33	BAYLOR	17	OKLAHOMA	1739	1440	0	0	339
20Oct01	PENN ST.	38	NORTHWESTERN	35	NORTHWESTERN	0	0	238	320	340
20Oct01	RICE	33	NEVADA	30	RICE	0	0	0	0	341
20Oct01	RUTGERS	23	NAVY	17	RUTGERS	0	0	0	0	342
20Oct01	SAN JOSE ST.	40	UTEP	28	UTEP	0	0	0	0	343
20Oct01	SOUTH CAROLINA	46	VANDERBILT	14	SOUTH CAROLINA	710	587	0	0	344
20Oct01	STANFORD	49	OREGON	42	OREGON	70	52	1506	1244	345
20Oct01	SYRACUSE	45	TEMPLE	3	SYRACUSE	19	19	0	0	346
20Oct01	TCU	38	ARMY	20	TCU	0	0	0	0	347
20Oct01	TENNESSEE	35	ALABAMA	24	ALABAMA	924	806	0	0	348
20Oct01	TEXAS	41	COLORADO	7	TEXAS	1251	1018	744	449	349
20Oct01	TEXAS A & M	31	KANSAS ST.	24	KANSAS ST.	71	69	7	12	350
20Oct01	UAB	34	TULANE	27	UAB	0	0	0	0	351
20Oct01	UCLA	56	CALIFORNIA	17	UCLA	1530	1239	0	0	352
20Oct01	UTAH	35	WYOMING	0	UTAH	0	3	0	0	353
20Oct01	WASHINGTON	31	ARIZONA	28	WASHINGTON	725	713	0	0	354
25Oct01	MIAMI, FLORIDA	45	WEST VIRGINIA	3	MIAMI, FLORIDA	1771	1481	0	0	355
26Oct01	HAWAII	38	FRESNO ST.	34	HAWAII	0	0	499	373	356
27Oct01	ARKANSAS	42	AUBURN	17	ARKANSAS	0	1	663	499	357
27Oct01	ARKANSAS ST.	34	IDAHO	31	ARKANSAS ST.	0	0	0	0	358
27Oct01	ARMY	42	TULANE	35	ARMY	0	0	0	0	359
27Oct01	BALL ST.	10	CONNECTICUT	5	CONNECTICUT	0	0	0	0	360
27Oct01	BOISE ST.	49	NEVADA	7	BOISE ST.	0	0	0	0	361
27Oct01	BOSTON COLLEGE	21	NOTRE DAME	17	BOSTON COLLEGE	0	2	0	0	362
27Oct01	BRIGHAM YOUNG	59	SAN DIEGO ST.	21	SAN DIEGO ST.	794	856	0	0	363
27Oct01	CLEMSON	21	WAKE FOREST	14	WAKE FOREST	52	90	0	0	364
27Oct01	COLORADO	22	OKLAHOMA ST.	19	OKLAHOMA ST.	203	87	0	0	365
27Oct01	COLORADO ST.	19	UTAH	17	COLORADO ST.	0	0	4	8	366
27Oct01	EASTERN MICH.	24	BUFFALO	20	EASTERN MICH.	0	0	0	0	367
27Oct01	FLORIDA	24	GEORGIA	10	GEORGIA	1389	1155	812	598	368
27Oct01	FLORIDA ST.	52	MARYLAND	31	FLORIDA ST.	488	403	1082	843	369
27Oct01	KANSAS ST.	40	KANSAS	6	KANSAS ST.	0	0	0	0	370

Date	Wcode	Wscore	Lcode	Lscore	Home	WAP	WESPN	LAP	LESPN	Game
27Oct01	KENT ST.	24	OHIO U.	14	OHIO U.	0	0	0	0	371
27Oct01	LA-LAFAYETTE	17	LOUISIANA-MONROE	12	LA-LAFAYETTE	0	0	0	0	372
27Oct01	LOUISIANA TECH	41	RICE	38	LOUISIANA TECH	0	0	0	0	373
27Oct01	LOUISVILLE	28	CINCINNATI	13	CINCINNATI	9	30	0	0	374
27Oct01	MARSHALL	50	AKRON	33	MARSHALL	1	25	0	0	375
27Oct01	MIAMI, OHIO	25	WESTERN MICH.	11	MIAMI, OHIO	0	0	0	0	376
27Oct01	MICHIGAN	32	IOWA	26	IOWA	1246	1077	0	0	377
27Oct01	MICHIGAN ST.	42	WISCONSIN	28	WISCONSIN	2	19	0	0	378
27Oct01	MIDDLE TENN.	39	NEW MEXICO ST.	35	MIDDLE TENN.	0	0	0	0	379
27Oct01	MISSISSIPPI	35	LSU	24	LSU	65	15	37	58	380
27Oct01	NEBRASKA	20	OKLAHOMA	10	NEBRASKA	1626	1385	1741	1444	381
27Oct01	NEW MEXICO	52	AIR FORCE	33	NEW MEXICO	0	0	0	0	382
27Oct01	NORTH CAROLINA ST.	24	VIRGINIA	0	NORTH CAROLINA ST.	0	0	0	0	383
27Oct01	NORTHERN ILLINOIS	33	CENTRAL MICHIGAN	24	CENTRAL MICHIGAN	0	0	0	0	384
27Oct01	OREGON	24	WASHINGTON ST.	17	WASHINGTON ST.	981	793	837	620	385
27Oct01	OREGON ST.	19	CALIFORNIA	10	OREGON ST.	0	8	0	0	386
27Oct01	PENN ST.	29	OHIO ST.	27	PENN ST.	0	0	22	5	387
27Oct01	PITTSBURGH	33	TEMPLE	7	TEMPLE	0	0	0	0	388
27Oct01	PURDUE	32	NORTHWESTERN	27	PURDUE	235	290	18	19	389
27Oct01	SAN JOSE ST.	63	TULSA	27	SAN JOSE ST.	0	0	0	0	390
27Oct01	SMU	40	UTEP	14	SMU	0	0	0	0	391
27Oct01	SOUTHERN MISS.	58	HOUSTON	14	SOUTHERN MISS.	0	0	0	0	392
27Oct01	STANFORD	38	UCLA	28	STANFORD	471	255	1602	1277	393
27Oct01	SYRACUSE	22	VIRGINIA TECH	14	VIRGINIA TECH	52	45	1513	1298	394
27Oct01	TENNESSEE	17	SOUTH CAROLINA	10	TENNESSEE	1086	948	873	708	395
27Oct01	TEXAS	35	MISSOURI	16	MISSOURI	1378	1136	0	0	396
27Oct01	TEXAS A & M	24	IOWA ST.	21	TEXAS A & M	176	202	9	20	397
27Oct01	TEXAS TECH	63	BAYLOR	19	BAYLOR	0	0	0	0	398
27Oct01	TOLEDO	21	NAVY	20	TOLEDO	3	4	0	0	399
27Oct01	UAB	17	MEMPHIS	14	MEMPHIS	0	0	0	0	400
27Oct01	UNLV	47	WYOMING	26	WYOMING	0	0	0	0	401
27Oct01	USC	41	ARIZONA	34	ARIZONA	0	0	0	0	402
27Oct01	UTAH ST.	30	CENTRAL FLORIDA	27	UTAH ST.	0	0	0	0	403
27Oct01	VANDERBILT	42	DUKE	28	DUKE	0	0	0	0	404
27Oct01	WASHINGTON	33	ARIZONA ST.	31	ARIZONA ST.	847	846	0	0	405
30Oct01	EAST CAROLINA	37	TCU	30	TCU	0	0	0	0	406
01Nov01	BRIGHAM YOUNG	56	COLORADO ST.	34	BRIGHAM YOUNG	972	999	0	0	407
01Nov01	GEORGIA TECH	28	NORTH CAROLINA	21	GEORGIA TECH	316	330	319	103	408
03Nov01	AIR FORCE	34	ARMY	24	AIR FORCE	0	0	0	0	409
03Nov01	ARIZONA	38	CALIFORNIA	24	CALIFORNIA	0	0	0	0	410
03Nov01	ARKANSAS	58	MISSISSIPPI	56	MISSISSIPPI	0	2	200	103	411
03Nov01	BALL ST.	38	CENTRAL MICHIGAN	34	BALL ST.	0	0	0	0	412
03Nov01	BUFFALO	44	OHIO U.	0	BUFFALO	0	0	0	0	413
03Nov01	CENTRAL FLORIDA	57	AKRON	17	CENTRAL FLORIDA	0	0	0	0	414
03Nov01	CINCINNATI	45	CONNECTICUT	28	CINCINNATI	0	0	0	0	415
03Nov01	COLORADO	38	MISSOURI	24	COLORADO	218	145	0	0	416
03Nov01	FLORIDA	71	VANDERBILT	13	FLORIDA	1587	1308	0	0	417
03Nov01	FLORIDA ST.	41	CLEMSON	27	CLEMSON	822	704	32	160	418
03Nov01	FRESNO ST.	52	RICE	24	FRESNO ST.	17	12	0	0	419
03Nov01	HAWAII	34	SAN JOSE ST.	10	HAWAII	0	0	0	0	420
03Nov01	IDAHO	42	LOUISIANA-MONROE	38	IDAHO	0	0	0	0	421
03Nov01	ILLINOIS	38	PURDUE	13	PURDUE	406	402	428	541	422
03Nov01	INDIANA	56	NORTHWESTERN	21	INDIANA	0	0	0	0	423
03Nov01	KANSAS ST.	42	IOWA ST.	3	IOWA ST.	0	0	3	3	424
03Nov01	LOUISIANA TECH	48	BOISE ST.	42	LOUISIANA TECH	0	0	0	0	425
03Nov01	LOUISVILLE	52	TULANE	7	TULANE	19	68	0	0	426
03Nov01	LSU	35	ALABAMA	21	ALABAMA	5	0	0	0	427
03Nov01	MARSHALL	42	KENT ST.	21	KENT ST.	6	46	0	0	428
03Nov01	MARYLAND	47	TROY ST.	14	MARYLAND	659	510	0	0	429
03Nov01	MIAMI, FLORIDA	38	TEMPLE	0	MIAMI, FLORIDA	1783	1486	0	0	430
03Nov01	MIAMI, OHIO	24	BOWLING GREEN	21	BOWLING GREEN	2	0	0	0	431
03Nov01	MICHIGAN ST.	26	MICHIGAN	24	MICHIGAN ST.	21	11	1374	1186	432
03Nov01	MIDDLE TENN.	54	ARKANSAS ST.	6	MIDDLE TENN.	0	0	0	0	433
03Nov01	MISSISSIPPI ST.	17	KENTUCKY	14	MISSISSIPPI ST.	0	0	0	0	434
03Nov01	NEBRASKA	51	KANSAS	7	KANSAS	1745	1454	0	0	435
03Nov01	NEVADA	35	SMU	14	NEVADA	0	0	0	0	436
03Nov01	NEW MEXICO	20	SAN DIEGO ST.	15	SAN DIEGO ST.	0	0	0	0	437
03Nov01	NORTH CAROLINA ST.	55	DUKE	31	DUKE	0	0	0	0	438
03Nov01	NORTH TEXAS	22	NEW MEXICO ST.	20	NEW MEXICO ST.	0	0	0	0	439
03Nov01	NORTHERN ILLINOIS	40	EASTERN MICH.	17	NORTHERN ILLINOIS	0	0	0	0	440
03Nov01	OHIO ST.	31	MINNESOTA	28	MINNESOTA	0	0	0	0	441
03Nov01	OKLAHOMA	58	TULSA	0	OKLAHOMA	1596	1263	0	0	442
03Nov01	OREGON	42	ARIZONA ST.	24	OREGON	1218	963	0	0	443
03Nov01	PENN ST.	38	SOUTHERN MISS.	20	PENN ST.	0	0	0	0	444

Date	Wcode	Wscore	Lcode	Lscore	Home	WAP	WESPN	LAP	LESPN	Game
03Nov01	PITTSBURGH	38	VIRGINIA TECH	7	PITTSBURGH	0	0	981	925	445
03Nov01	SOUTH FLORIDA	45	HOUSTON	6	SOUTH FLORIDA	0	0	0	0	446
03Nov01	TENNESSEE	28	NOTRE DAME	18	NOTRE DAME	1323	1112	0	0	447
03Nov01	TEXAS	49	BAYLOR	10	BAYLOR	1522	1259	0	0	448
03Nov01	TEXAS TECH	12	TEXAS A & M	0	TEXAS TECH	0	0	279	411	449
03Nov01	USC	16	OREGON ST.	13	USC	0	0	0	0	450
03Nov01	UTAH	42	UNLV	14	UNLV	0	0	0	0	451
03Nov01	WAKE FOREST	34	VIRGINIA	30	VIRGINIA	0	0	0	0	452
03Nov01	WASHINGTON	42	STANFORD	28	WASHINGTON	1012	953	1074	719	453
03Nov01	WASHINGTON ST.	20	UCLA	14	WASHINGTON ST.	605	386	1214	936	454
03Nov01	WEST VIRGINIA	80	RUTGERS	7	WEST VIRGINIA	0	0	0	0	455
03Nov01	WISCONSIN	34	IOWA	28	WISCONSIN	0	0	0	0	456
06Nov01	TOLEDO	41	WESTERN MICH.	35	TOLEDO	7	2	0	0	457
08Nov01	COLORADO ST.	28	AIR FORCE	21	COLORADO ST.	0	0	0	0	458
10Nov01	ALABAMA	24	MISSISSIPPI ST.	17	ALABAMA	0	0	0	0	459
10Nov01	ARKANSAS	27	CENTRAL FLORIDA	20	ARKANSAS	27	15	0	0	460
10Nov01	AUBURN	24	GEORGIA	17	GEORGIA	125	113	556	303	461
10Nov01	BOISE ST.	28	HAWAII	21	HAWAII	0	0	2	1	462
10Nov01	BOWLING GREEN	17	OHIO U.	0	OHIO U.	0	0	0	0	463
10Nov01	BRIGHAM YOUNG	41	WYOMING	34	WYOMING	1147	1074	0	0	464
10Nov01	BUFFALO	26	ARMY	19	ARMY	0	0	0	0	465
10Nov01	CENTRAL MICHIGAN	35	EASTERN MICH.	30	CENTRAL MICHIGAN	0	0	0	0	466
10Nov01	COLORADO	40	IOWA ST.	27	IOWA ST.	389	317	0	0	467
10Nov01	EAST CAROLINA	28	CINCINNATI	26	CINCINNATI	0	0	0	0	468
10Nov01	FLORIDA	54	SOUTH CAROLINA	17	SOUTH CAROLINA	1591	1346	748	596	469
10Nov01	FRESNO ST.	38	SMU	13	SMU	23	26	0	0	470
10Nov01	ILLINOIS	33	PENN ST.	28	ILLINOIS	739	749	0	0	471
10Nov01	INDIANA	37	MICHIGAN ST.	28	MICHIGAN ST.	0	0	287	154	472
10Nov01	IOWA	59	NORTHWESTERN	16	NORTHWESTERN	0	0	0	0	473
10Nov01	KENT ST.	31	BALL ST.	18	BALL ST.	0	0	0	0	474
10Nov01	KENTUCKY	56	VANDERBILT	30	VANDERBILT	0	0	0	0	475
10Nov01	LOUISIANA TECH	53	UTEP	30	UTEP	1	0	0	0	476
10Nov01	LOUISVILLE	34	HOUSTON	10	LOUISVILLE	121	141	0	0	477
10Nov01	LSU	30	MIDDLE TENN.	14	LSU	20	14	0	0	478
10Nov01	MARSHALL	27	MIAMI, OHIO	21	MIAMI, OHIO	29	57	0	0	479
10Nov01	MARYLAND	37	CLEMSON	20	MARYLAND	892	767	5	19	480
10Nov01	MIAMI, FLORIDA	18	BOSTON COLLEGE	7	BOSTON COLLEGE	1781	1479	27	50	481
10Nov01	MICHIGAN	31	MINNESOTA	10	MICHIGAN	922	755	0	0	482
10Nov01	MISSOURI	41	BAYLOR	24	MISSOURI	0	0	0	0	483
10Nov01	NEBRASKA	31	KANSAS ST.	21	NEBRASKA	1745	1456	0	0	484
10Nov01	NEW MEXICO	27	UNLV	17	NEW MEXICO	0	0	0	0	485
10Nov01	NEW MEXICO ST.	28	ARKANSAS ST.	17	NEW MEXICO ST.	0	0	0	0	486
10Nov01	NORTH CAROLINA ST.	34	FLORIDA ST.	28	FLORIDA ST.	0	0	1060	880	487
10Nov01	NORTH TEXAS	42	LA-LAFAYETTE	17	NORTH TEXAS	0	0	0	0	488
10Nov01	OHIO ST.	35	PURDUE	9	OHIO ST.	1	3	94	145	489
10Nov01	OKLAHOMA	31	TEXAS A & M	10	OKLAHOMA	1623	1330	32	71	490
10Nov01	OREGON	21	UCLA	20	UCLA	1343	1080	693	570	491
10Nov01	OREGON ST.	49	WASHINGTON	24	OREGON ST.	0	0	1288	1078	492
10Nov01	PITTSBURGH	42	RUTGERS	0	RUTGERS	0	0	0	0	493
10Nov01	RICE	59	TULSA	32	RICE	0	0	0	0	494
10Nov01	SAN JOSE ST.	64	NEVADA	45	SAN JOSE ST.	0	0	0	0	495
10Nov01	STANFORD	51	ARIZONA	37	ARIZONA	731	422	0	0	496
10Nov01	SYRACUSE	24	WEST VIRGINIA	13	SYRACUSE	588	463	0	0	497
10Nov01	TENNESSEE	49	MEMPHIS	28	TENNESSEE	1399	1173	0	0	498
10Nov01	TEXAS	59	KANSAS	0	TEXAS	1517	1256	0	0	499
10Nov01	TEXAS TECH	49	OKLAHOMA ST.	30	OKLAHOMA ST.	18	16	0	0	500
10Nov01	TROY ST.	44	LOUISIANA-MONROE	12	LOUISIANA-MONROE	0	0	0	0	501
10Nov01	TULANE	42	NAVY	28	NAVY	0	0	0	0	502
10Nov01	UAB	38	TCU	17	UAB	0	0	0	0	503
10Nov01	USC	55	CALIFORNIA	14	CALIFORNIA	0	0	0	0	504
10Nov01	UTAH	17	SAN DIEGO ST.	3	UTAH	1	3	0	0	505
10Nov01	UTAH ST.	38	CONNECTICUT	31	CONNECTICUT	0	0	0	0	506
10Nov01	VIRGINIA	39	GEORGIA TECH	38	VIRGINIA	0	0	501	513	507
10Nov01	VIRGINIA TECH	35	TEMPLE	0	TEMPLE	221	286	0	0	508
10Nov01	WAKE FOREST	32	NORTH CAROLINA	31	NORTH CAROLINA	0	0	30	7	509
10Nov01	WASHINGTON ST.	28	ARIZONA ST.	16	ARIZONA ST.	1050	758	0	0	510
15Nov01	LOUISVILLE	39	EAST CAROLINA	34	EAST CAROLINA	417	383	0	1	511
17Nov01	AKRON	41	BUFFALO	14	BUFFALO	0	0	0	0	512
17Nov01	ALABAMA	31	AUBURN	7	AUBURN	0	0	596	394	513
17Nov01	ARKANSAS	24	MISSISSIPPI ST.	21	ARKANSAS	64	26	0	0	514
17Nov01	BOISE ST.	56	SAN JOSE ST.	6	BOISE ST.	0	0	0	0	515
17Nov01	BOSTON COLLEGE	38	RUTGERS	7	RUTGERS	54	24	0	0	516
17Nov01	BOWLING GREEN	43	NORTHWESTERN	42	NORTHWESTERN	0	0	0	0	517
17Nov01	BRIGHAM YOUNG	24	UTAH	21	BRIGHAM YOUNG	1188	1055	16	20	518

Date	Wcode	Wscore	Lcode	Lscore	Home	WAP	WESPN	LAP	LESPN	Game
17Nov01	COLORADO ST.	24	NEW MEXICO	17	NEW MEXICO	0	0	0	0	519
17Nov01	FLORIDA	37	FLORIDA ST.	13	FLORIDA	1608	1350	368	361	520
17Nov01	FRESNO ST.	61	NEVADA	14	NEVADA	85	74	0	0	521
17Nov01	GEORGIA	35	MISSISSIPPI	15	MISSISSIPPI	131	57	63	42	522
17Nov01	GEORGIA TECH	38	WAKE FOREST	33	WAKE FOREST	109	161	0	0	523
17Nov01	HAWAII	52	MIAMI, OHIO	51	HAWAII	0	5	0	0	524
17Nov01	ILLINOIS	34	OHIO ST.	22	OHIO ST.	1020	860	112	63	525
17Nov01	IOWA	42	MINNESOTA	24	IOWA	0	0	0	0	526
17Nov01	IOWA ST.	49	KANSAS	7	KANSAS	0	0	0	0	527
17Nov01	KANSAS ST.	40	LOUISIANA TECH	7	KANSAS ST.	0	0	4	1	528
17Nov01	LOUISIANA-MONROE	16	ARKANSAS ST.	7	ARKANSAS ST.	0	0	0	0	529
17Nov01	MARSHALL	42	OHIO U.	18	MARSHALL	128	139	0	0	530
17Nov01	MARYLAND	23	NORTH CAROLINA ST.	19	NORTH CAROLINA ST.	1103	956	98	43	531
17Nov01	MEMPHIS	42	ARMY	10	MEMPHIS	0	0	0	0	532
17Nov01	MIAMI, FLORIDA	59	SYRACUSE	0	MIAMI, FLORIDA	1768	1459	843	703	533
17Nov01	MICHIGAN	20	WISCONSIN	17	WISCONSIN	1078	902	0	0	534
17Nov01	MIDDLE TENN.	38	CONNECTICUT	14	MIDDLE TENN.	0	0	0	0	535
17Nov01	NEW MEXICO ST.	49	LA-LAFAYETTE	46	LA-LAFAYETTE	0	0	0	0	536
17Nov01	NORTH CAROLINA	52	DUKE	17	NORTH CAROLINA	0	2	0	0	537
17Nov01	NORTH TEXAS	50	IDAHO	27	IDAHO	0	0	0	0	538
17Nov01	NORTHERN ILLINOIS	33	BALL ST.	29	NORTHERN ILLINOIS	0	0	0	0	539
17Nov01	NOTRE DAME	34	NAVY	16	NOTRE DAME	0	0	0	0	540
17Nov01	OKLAHOMA	30	TEXAS TECH	13	TEXAS TECH	1609	1329	68	58	541
17Nov01	OKLAHOMA ST.	38	BAYLOR	22	BAYLOR	0	0	0	0	542
17Nov01	PENN ST.	28	INDIANA	14	PENN ST.	0	0	0	0	543
17Nov01	PURDUE	24	MICHIGAN ST.	14	PURDUE	0	7	5	13	544
17Nov01	RICE	27	UTEP	17	RICE	0	0	0	0	545
17Nov01	SAN DIEGO ST.	38	WYOMING	16	SAN DIEGO ST.	0	0	0	0	546
17Nov01	SMU	24	TULSA	14	TULSA	0	0	0	0	547
17Nov01	SOUTH CAROLINA	20	CLEMSON	15	SOUTH CAROLINA	341	251	0	3	548
17Nov01	SOUTHERN MISS.	59	TULANE	6	SOUTHERN MISS.	0	0	0	0	549
17Nov01	STANFORD	35	CALIFORNIA	28	STANFORD	917	639	0	0	550
17Nov01	TEMPLE	17	WEST VIRGINIA	14	WEST VIRGINIA	0	0	0	0	551
17Nov01	TENNESSEE	38	KENTUCKY	35	KENTUCKY	1407	1183	0	0	552
17Nov01	TOLEDO	28	EASTERN MICH.	7	TOLEDO	16	33	0	0	553
17Nov01	UAB	43	HOUSTON	21	HOUSTON	0	0	0	0	554
17Nov01	UNLV	34	AIR FORCE	10	AIR FORCE	0	0	0	0	555
17Nov01	USC	27	UCLA	0	USC	0	0	379	278	556
17Nov01	VIRGINIA TECH	31	VIRGINIA	17	VIRGINIA	459	505	0	0	557
17Nov01	WASHINGTON	26	WASHINGTON ST.	14	WASHINGTON	722	658	1187	926	558
17Nov01	WESTERN MICH.	20	CENTRAL MICHIGAN	17	WESTERN MICH.	0	0	0	0	559
22Nov01	ILLINOIS	34	NORTHWESTERN	28	ILLINOIS	1130	934	0	0	560
22Nov01	MISSISSIPPI ST.	36	MISSISSIPPI	28	MISSISSIPPI ST.	0	0	4	2	561
23Nov01	ARIZONA	34	ARIZONA ST.	21	ARIZONA ST.	0	0	0	0	562
23Nov01	BOWLING GREEN	56	TOLEDO	21	BOWLING GREEN	0	0	50	51	563
23Nov01	CALIFORNIA	20	RUTGERS	10	RUTGERS	0	0	0	0	564
23Nov01	COLORADO	62	NEBRASKA	36	COLORADO	867	673	1746	1462	565
23Nov01	FRESNO ST.	40	SAN JOSE ST.	21	FRESNO ST.	207	221	0	0	566
23Nov01	LSU	41	ARKANSAS	38	LSU	40	40	189	74	567
23Nov01	SOUTHERN MISS.	28	EAST CAROLINA	21	EAST CAROLINA	0	0	1	0	568
23Nov01	TCU	37	LOUISVILLE	22	TCU	0	0	609	557	569
23Nov01	TEXAS	21	TEXAS A & M	7	TEXAS A & M	1519	1257	27	47	570
24Nov01	AKRON	65	EASTERN MICH.	62	AKRON	0	0	0	0	571
24Nov01	BALL ST.	35	WESTERN MICH.	31	WESTERN MICH.	0	0	0	0	572
24Nov01	BOISE ST.	26	CENTRAL MICHIGAN	10	BOISE ST.	0	0	0	0	573
24Nov01	CENTRAL FLORIDA	31	LA-LAFAYETTE	0	CENTRAL FLORIDA	0	0	0	0	574
24Nov01	CINCINNATI	36	MEMPHIS	34	MEMPHIS	0	0	0	0	575
24Nov01	GEORGIA	31	GEORGIA TECH	17	GEORGIA TECH	434	190	284	360	576
24Nov01	HAWAII	52	AIR FORCE	30	HAWAII	0	0	0	0	577
24Nov01	INDIANA	13	PURDUE	7	INDIANA	0	0	57	48	578
24Nov01	IOWA ST.	17	IOWA	14	IOWA ST.	0	0	4	1	579
24Nov01	KANSAS	27	WYOMING	14	KANSAS	0	0	0	0	580
24Nov01	KANSAS ST.	24	MISSOURI	3	KANSAS ST.	0	0	0	0	581
24Nov01	KENT ST.	24	MIAMI, OHIO	20	KENT ST.	0	0	0	0	582
24Nov01	LOUISIANA TECH	19	TULSA	7	TULSA	0	0	0	0	583
24Nov01	MIAMI, FLORIDA	65	WASHINGTON	7	MIAMI, FLORIDA	1777	1468	987	842	584
24Nov01	MINNESOTA	42	WISCONSIN	31	MINNESOTA	0	0	0	0	585
24Nov01	NEVADA	48	UTEP	31	UTEP	0	0	0	0	586
24Nov01	NEW MEXICO	53	NEW MEXICO ST.	0	NEW MEXICO	0	0	0	0	587
24Nov01	NORTH CAROLINA ST.	27	OHIO U.	7	NORTH CAROLINA ST.	25	12	0	0	588
24Nov01	OHIO ST.	26	MICHIGAN	20	MICHIGAN	0	1	1103	930	589
24Nov01	OKLAHOMA ST.	16	OKLAHOMA	13	OKLAHOMA	0	0	1613	1327	590
24Nov01	PENN ST.	42	MICHIGAN ST.	37	MICHIGAN ST.	0	0	5	0	591
24Nov01	PITTSBURGH	23	WEST VIRGINIA	17	WEST VIRGINIA	0	0	0	0	592

Date	Wcode	Wscore	Lcode	Lscore	Home	WAP	WESPN	LAP	LESPN	Game
24Nov01	SMU	37	RICE	20	SMU	0	0	0	0	593
24Nov01	SOUTH FLORIDA	34	UTAH ST.	13	SOUTH FLORIDA	0	0	0	0	594
24Nov01	STANFORD	17	NOTRE DAME	13	STANFORD	958	750	0	0	595
24Nov01	SYRACUSE	39	BOSTON COLLEGE	28	SYRACUSE	272	258	148	64	596
24Nov01	TEMPLE	56	CONNECTICUT	7	TEMPLE	0	0	0	0	597
24Nov01	TENNESSEE	38	VANDERBILT	0	TENNESSEE	1372	1161	0	0	598
24Nov01	WAKE FOREST	38	NORTHERN ILLINOIS	35	WAKE FOREST	0	0	0	0	599
29Nov01	ALABAMA	28	SOUTHERN MISS.	15	ALABAMA	0	4	2	0	600
30Nov01	TOLEDO	41	MARSHALL	36	TOLEDO	20	6	460	425	601
01Dec01	AIR FORCE	38	UTAH	37	AIR FORCE	0	0	16	10	602
01Dec01	ARMY	26	NAVY	17	NAVY	0	0	0	0	603
01Dec01	BRIGHAM YOUNG	41	MISSISSIPPI ST.	38	MISSISSIPPI ST.	1244	1080	0	0	604
01Dec01	CINCINNATI	42	LOUISIANA-MONROE	10	CINCINNATI	0	0	0	0	605
01Dec01	CLEMSON	59	DUKE	31	CLEMSON	0	0	0	0	606
01Dec01	COLORADO	39	TEXAS	37	TEXAS	1261	991	1644	1358	607
01Dec01	FLORIDA ST.	28	GEORGIA TECH	17	FLORIDA ST.	64	53	47	104	608
01Dec01	FRESNO ST.	70	UTAH ST.	21	FRESNO ST.	404	334	0	0	609
01Dec01	GEORGIA	35	HOUSTON	7	GEORGIA	660	420	0	0	610
01Dec01	INDIANA	26	KENTUCKY	15	INDIANA	0	0	0	0	611
01Dec01	LSU	27	AUBURN	14	LSU	268	164	156	223	612
01Dec01	MIAMI, FLORIDA	26	VIRGINIA TECH	24	VIRGINIA TECH	1799	1499	783	763	613
01Dec01	MICHIGAN ST.	55	MISSOURI	7	MICHIGAN ST.	0	0	0	0	614
01Dec01	MISSISSIPPI	38	VANDERBILT	27	MISSISSIPPI	0	0	0	0	615
01Dec01	NORTH CAROLINA	19	SMU	10	NORTH CAROLINA	0	9	0	0	616
01Dec01	NOTRE DAME	24	PURDUE	18	PURDUE	0	0	0	4	617
01Dec01	OREGON	17	OREGON ST.	14	OREGON	1540	1257	0	0	618
01Dec01	PITTSBURGH	24	UAB	6	PITTSBURGH	0	0	0	0	619
01Dec01	STANFORD	41	SAN JOSE ST.	14	SAN JOSE ST.	1034	817	0	0	620
01Dec01	TENNESSEE	34	FLORIDA	32	FLORIDA	1511	1289	1716	1432	621
01Dec01	TROY ST.	18	NORTH TEXAS	16	TROY ST.	0	0	0	0	622
01Dec01	UCLA	52	ARIZONA ST.	42	UCLA	0	0	0	0	623
01Dec01	VIRGINIA	20	PENN ST.	14	VIRGINIA	0	0	1	3	624
07Dec01	TCU	14	SOUTHERN MISS.	12	SOUTHERN MISS.	0	0	0	0	625
08Dec01	HAWAII	72	BRIGHAM YOUNG	45	HAWAII	1	0	1245	1094	626
08Dec01	LSU	31	TENNESSEE	20	TENNESSEE	456	358	1709	1419	627
18Dec01	COLORADO ST.	45	NORTH TEXAS	20	NORTH TEXAS	0	0	0	0	628
19Dec01	MARSHALL	64	EAST CAROLINA	61	EAST CAROLINA	21	59	0	0	629
20Dec01	PITTSBURGH	34	NORTH CAROLINA ST.	19	NORTH CAROLINA ST.	0	0	37	23	630
25Dec01	UTAH	10	USC	6	UTAH	0	0	0	5	631
27Dec01	ALABAMA	14	IOWA ST.	13	ALABAMA	0	10	4	13	632
27Dec01	GEORGIA TECH	24	STANFORD	14	STANFORD	11	4	1088	889	633
28Dec01	BOSTON COLLEGE	20	GEORGIA	16	GEORGIA	13	21	672	469	634
28Dec01	TEXAS	47	WASHINGTON	43	WASHINGTON	1226	1034	502	393	635
28Dec01	TEXAS A & M	28	TCU	9	TEXAS A & M	6	7	0	0	636
29Dec01	IOWA	19	TEXAS TECH	16	TEXAS TECH	0	0	3	1	637
29Dec01	SYRACUSE	26	KANSAS ST.	3	KANSAS ST.	523	492	0	0	638
29Dec01	TOLEDO	23	CINCINNATI	16	CINCINNATI	85	45	0	0	639
31Dec01	CLEMSON	49	LOUISIANA TECH	24	CLEMSON	0	0	2	0	640
31Dec01	LOUISVILLE	28	BRIGHAM YOUNG	10	LOUISVILLE	225	221	522	529	641
31Dec01	MICHIGAN ST.	44	FRESNO ST.	35	FRESNO ST.	0	0	518	323	642
31Dec01	NORTH CAROLINA	16	AUBURN	10	NORTH CAROLINA	7	10	26	29	643
31Dec01	WASHINGTON ST.	33	PURDUE	27	PURDUE	897	764	0	0	644
01Jan02	FLORIDA ST.	30	VIRGINIA TECH	17	FLORIDA ST.	160	137	732	595	645
01Jan02	LSU	47	ILLINOIS	34	LSU	1006	778	1381	1145	646
01Jan02	OKLAHOMA	10	ARKANSAS	3	OKLAHOMA	1222	936	22	22	647
01Jan02	OREGON	38	COLORADO	16	OREGON	1698	1398	1649	1337	648
01Jan02	SOUTH CAROLINA	31	OHIO ST.	28	SOUTH CAROLINA	742	660	268	198	649
01Jan02	TENNESSEE	45	MICHIGAN	17	TENNESSEE	1309	1105	620	624	650
02Jan02	FLORIDA	56	MARYLAND	23	FLORIDA	1396	1184	1384	1167	651
03Jan02	MIAMI, FLORIDA	37	NEBRASKA	14	MIAMI, FLORIDA	1800	1500	1556	1334	652

Appendix B – SAS Code

```
OPTION MPRINT ERROR=1;

%MACRO WEEKLY(WK);

%MACRO FILEIN(MOV);

*************** SETUP RAW MONTHLY DATA ***************;

DATA TEMP;
 INFILE SASIN;
 INPUT GDATE DATE7. TEAM $ 8-29 SCORE 30-36 OPPON $ 37-56
  OPPSCO 57-64 HOMET $ 65-83 WAP 84-92 WESPN 93-98;
  IF GDATE<&WK;

DATA TEMP2;
 SET TEMP;
 TEAM2=OPPON;
 OPPON2=TEAM;
 SCORE2=OPPSCO;
 OPPSCO2=SCORE;
 WAP2=WAP;
 WESPN2=WESPN;
DROP TEAM OPPON SCORE OPPSCO WAP WESPN;

DATA TEMP;
 SET TEMP TEMP2(RENAME=(TEAM2=TEAM OPPON2=OPPON SCORE2=SCORE
  OPPSCO2=OPPSCO WAP2=WAP WESPN2=WESPN));
 HOME=0;
 *** ELIMINATE MARGIN OF VICTORY ***;
 %IF &MOV='NONE' %THEN %DO;
   IF SCORE>OPPSCO THEN SCORE=1;
   ELSE SCORE=0;
   OPPSCO=1-SCORE;
 %END;
 *** ROTHMANS MARGIN OF VICTORY ***;
 %IF &MOV='ROTH' %THEN %DO;
   IF SCORE>OPPSCO THEN DO;
     SCORE=1-.5/(1+EXP(1.8137993642*ABS(SCORE-OPPSCO)/15));
     OPPSCO=1-SCORE;
   END;
   ELSE DO;
     OPPSCO=1-.5/(1+EXP(1.8137993642*ABS(SCORE-OPPSCO)/15));
     SCORE=1-OPPSCO;
   END;
 %END;
 IF TEAM=HOMET THEN HOME=1;

 DROP HOMET;

DATA SASOUT.FOOT;
 SET TEMP;
 FORMAT GDATE DATE9.;
 IF GDATE=. THEN DELETE;

 WIN=1;
 IF OPPSCO>SCORE THEN WIN=0;
 LOSS=1;
```

```
 IF OPPSCO<SCORE THEN LOSS=0;

DATA TEMP2;
 SET _NULL_;

*******************************;

%MEND;

%FILEIN('REGS');

*************** CHECKING INPUT ********;
      /*
PROC TABULATE;
 CLASS TEAM;
 VAR WIN SCORE;
 TABLE TEAM, (WIN SCORE)*SUM;
      */
*************** SETUP DEFENSE SCORES ********;

DATA TEMP;
 SET TEMP;

%MACRO INIT;

ATCS=0;
BEST=0;
BTEN=0;
BTWV=0;
CUSA=0;
INDE=0;
MIDA=0;
MWST=0;
PTEN=0;
SECO=0;
WACO=0;
SUNB=0;
AIR=0;
AKR=0;
ALA=0;
ARZ=0;
AZS=0;
ARK=0;
ARS=0;
AMY=0;
AUB=0;
BLL=0;
BYL=0;
BOI=0;
BSC=0;
BWG=0;
BYU=0;
BFF=0;
CAL=0;
CFL=0;
CMI=0;
CIN=0;
CLE=0;
COL=0;
CON=0;
CST=0;
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DUK=0;
ECA=0;
EMI=0;
FLA=0;
FLS=0;
FRS=0;
GEO=0;
GAT=0;
HAW=0;
HOU=0;
IDA=0;
ILL=0;
IND=0;
IOW=0;
IAS=0;
KAN=0;
KSS=0;
KNT=0;
KTK=0;
LAL=0;
LAT=0;
LMR=0;
LSV=0;
LSU=0;
MSH=0;
MYL=0;
MMP=0;
MIA=0;
MIO=0;
MIC=0;
MIS=0;
MTE=0;
MNN=0;
MSP=0;
MST=0;
MSO=0;
NVY=0;
NEB=0;
NEV=0;
NMX=0;
NMS=0;
UNC=0;
NCS=0;
NTX=0;
NIL=0;
NWN=0;
NDM=0;
OHS=0;
OHU=0;
OKU=0;
OKS=0;
UOR=0;
ORS=0;
PNS=0;
PIT=0;
PUR=0;
RIC=0;
RUT=0;
SDS=0;
SFL=0;
SJS=0;
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```
SMU=0;
SCU=0;
SMI=0;
STF=0;
SYR=0;
TCU=0;
TPL=0;
TEN=0;
TEX=0;
TAM=0;
TXT=0;
TOL=0;
TRY=0;
TUL=0;
TLS=0;
UAB=0;
ULA=0;
NLV=0;
USC=0;
UTH=0;
UTS=0;
UTP=0;
VAN=0;
VIR=0;
VAT=0;
WAK=0;
WSH=0;
WAS=0;
WVA=0;
WMI=0;
WIS=0;
WYO=0;

AIR1=0;
AKR1=0;
ALA1=0;
ARZ1=0;
AZS1=0;
ARK1=0;
ARS1=0;
AMY1=0;
AUB1=0;
BLL1=0;
BYL1=0;
BOI1=0;
BSC1=0;
BWG1=0;
BYU1=0;
BFF1=0;
CAL1=0;
CFL1=0;
CMI1=0;
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CLE1=0;
COL1=0;
CON1=0;
CST1=0;
DUK1=0;
ECA1=0;
EMI1=0;
FLA1=0;
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FLS1=0;
FRS1=0;
GEO1=0;
GAT1=0;
HAW1=0;
HOU1=0;
IDA1=0;
ILL1=0;
IND1=0;
IOW1=0;
IAS1=0;
KAN1=0;
KSS1=0;
KNT1=0;
KTK1=0;
LAL1=0;
LAT1=0;
LMR1=0;
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MNN1=0;
MSP1=0;
MST1=0;
MSO1=0;
NVY1=0;
NEB1=0;
NEV1=0;
NMX1=0;
NMS1=0;
UNC1=0;
NCS1=0;
NTX1=0;
NIL1=0;
NWN1=0;
NDM1=0;
OHS1=0;
OHU1=0;
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RUT1=0;
SDS1=0;
SFL1=0;
SJS1=0;
SMU1=0;
SCU1=0;
SMI1=0;
STF1=0;
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```
SYR1=0;
TCU1=0;
TPL1=0;
TEN1=0;
TEX1=0;
TAM1=0;
TXT1=0;
TOL1=0;
TRY1=0;
TUL1=0;
TLS1=0;
UAB1=0;
ULA1=0;
NLV1=0;
USC1=0;
UTH1=0;
UTS1=0;
UTP1=0;
VAN1=0;
VIR1=0;
VAT1=0;
WAK1=0;
WSH1=0;
WAS1=0;
WVA1=0;
WMI1=0;
WIS1=0;
WYO1=0;

%MEND;

%INIT;

%MACRO DCODES;

IF OPPON='AIR FORCE' THEN AIR=1;
ELSE IF OPPON='AKRON' THEN AKR=1;
ELSE IF OPPON='ALABAMA' THEN ALA=1;
ELSE IF OPPON='ARIZONA' THEN ARZ=1;
ELSE IF OPPON='ARIZONA ST.' THEN AZS=1;
ELSE IF OPPON='ARKANSAS' THEN ARK=1;
ELSE IF OPPON='ARKANSAS ST.' THEN ARS=1;
ELSE IF OPPON='ARMY' THEN AMY=1;
ELSE IF OPPON='AUBURN' THEN AUB=1;
ELSE IF OPPON='BALL ST.' THEN BLL=1;
ELSE IF OPPON='BAYLOR' THEN BYL=1;
ELSE IF OPPON='BOISE ST.' THEN BOI=1;
ELSE IF OPPON='BOSTON COLLEGE' THEN BSC=1;
ELSE IF OPPON='BOWLING GREEN' THEN BWG=1;
ELSE IF OPPON='BRIGHAM YOUNG' THEN BYU=1;
ELSE IF OPPON='BUFFALO' THEN BFF=1;
ELSE IF OPPON='CALIFORNIA' THEN CAL=1;
ELSE IF OPPON='CENTRAL FLORIDA' THEN CFL=1;
ELSE IF OPPON='CENTRAL MICHIGAN' THEN CMI=1;
ELSE IF OPPON='CINCINNATI' THEN CIN=1;
ELSE IF OPPON='CLEMSON' THEN CLE=1;
ELSE IF OPPON='COLORADO' THEN COL=1;
ELSE IF OPPON='COLORADO ST.' THEN CST=1;
ELSE IF OPPON='CONNECTICUT' THEN CON=1;
ELSE IF OPPON='DUKE' THEN DUK=1;
ELSE IF OPPON='EAST CAROLINA' THEN ECA=1;
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ELSE IF OPPON='EASTERN MICH.' THEN EMI=1;
ELSE IF OPPON='FLORIDA' THEN FLA=1;
ELSE IF OPPON='FLORIDA ST.' THEN FLS=1;
ELSE IF OPPON='FRESNO ST.' THEN FRS=1;
ELSE IF OPPON='GEORGIA' THEN GEO=1;
ELSE IF OPPON='GEORGIA TECH' THEN GAT=1;
ELSE IF OPPON='HAWAII' THEN HAW=1;
ELSE IF OPPON='HOUSTON' THEN HOU=1;
ELSE IF OPPON='IDAHO' THEN IDA=1;
ELSE IF OPPON='ILLINOIS' THEN ILL=1;
ELSE IF OPPON='INDIANA' THEN IND=1;
ELSE IF OPPON='IOWA' THEN IOW=1;
ELSE IF OPPON='IOWA ST.' THEN IAS=1;
ELSE IF OPPON='KANSAS' THEN KAN=1;
ELSE IF OPPON='KANSAS ST.' THEN KSS=1;
ELSE IF OPPON='KENT ST.' THEN KNT=1;
ELSE IF OPPON='KENTUCKY' THEN KTK=1;
ELSE IF OPPON='LA-LAFAYETTE' THEN LAL=1;
ELSE IF OPPON='LOUISIANA TECH' THEN LAT=1;
ELSE IF OPPON='LOUISIANA-MONROE' THEN LMR=1;
ELSE IF OPPON='LOUISVILLE' THEN LSV=1;
ELSE IF OPPON='LSU' THEN LSU=1;
ELSE IF OPPON='MARSHALL' THEN MSH=1;
ELSE IF OPPON='MARYLAND' THEN MYL=1;
ELSE IF OPPON='MEMPHIS' THEN MMP=1;
ELSE IF OPPON='MIAMI, FLORIDA' THEN MIA=1;
ELSE IF OPPON='MIAMI, OHIO' THEN MIO=1;
ELSE IF OPPON='MICHIGAN' THEN MIC=1;
ELSE IF OPPON='MICHIGAN ST.' THEN MIS=1;
ELSE IF OPPON='MIDDLE TENN.' THEN MTE=1;
ELSE IF OPPON='MINNESOTA' THEN MNN=1;
ELSE IF OPPON='MISSISSIPPI' THEN MSP=1;
ELSE IF OPPON='MISSISSIPPI ST.' THEN MST=1;
ELSE IF OPPON='MISSOURI' THEN MSO=1;
ELSE IF OPPON='NAVY' THEN NVY=1;
ELSE IF OPPON='NEBRASKA' THEN NEB=1;
ELSE IF OPPON='NEVADA' THEN NEV=1;
ELSE IF OPPON='NEW MEXICO' THEN NMX=1;
ELSE IF OPPON='NEW MEXICO ST.' THEN NMS=1;
ELSE IF OPPON='NORTH CAROLINA' THEN UNC=1;
ELSE IF OPPON='NORTH CAROLINA ST.' THEN NCS=1;
ELSE IF OPPON='NORTH TEXAS' THEN NTX=1;
ELSE IF OPPON='NORTHERN ILLINOIS' THEN NIL=1;
ELSE IF OPPON='NORTHWESTERN' THEN NWN=1;
ELSE IF OPPON='NOTRE DAME' THEN NDM=1;
ELSE IF OPPON='OHIO ST.' THEN OHS=1;
ELSE IF OPPON='OHIO U.' THEN OHU=1;
ELSE IF OPPON='OKLAHOMA' THEN OKU=1;
ELSE IF OPPON='OKLAHOMA ST.' THEN OKS=1;
ELSE IF OPPON='OREGON' THEN UOR=1;
ELSE IF OPPON='OREGON ST.' THEN ORS=1;
ELSE IF OPPON='PENN ST.' THEN PNS=1;
ELSE IF OPPON='PITTSBURGH' THEN PIT=1;
ELSE IF OPPON='PURDUE' THEN PUR=1;
ELSE IF OPPON='RICE' THEN RIC=1;
ELSE IF OPPON='RUTGERS' THEN RUT=1;
ELSE IF OPPON='SAN DIEGO ST.' THEN SDS=1;
ELSE IF OPPON='SAN JOSE ST.' THEN SJS=1;
ELSE IF OPPON='SMU' THEN SMU=1;
ELSE IF OPPON='SOUTH CAROLINA' THEN SCU=1;
ELSE IF OPPON='SOUTH FLORIDA' THEN SFL=1;
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ELSE IF OPPON='SOUTHERN MISS.' THEN SMI=1;
ELSE IF OPPON='STANFORD' THEN STF=1;
ELSE IF OPPON='SYRACUSE' THEN SYR=1;
ELSE IF OPPON='TCU' THEN TCU=1;
ELSE IF OPPON='TEMPLE' THEN TPL=1;
ELSE IF OPPON='TENNESSEE' THEN TEN=1;
ELSE IF OPPON='TEXAS' THEN TEX=1;
ELSE IF OPPON='TEXAS A & M' THEN TAM=1;
ELSE IF OPPON='TEXAS TECH' THEN TXT=1;
ELSE IF OPPON='TOLEDO' THEN TOL=1;
ELSE IF OPPON='TROY ST.' THEN TRY=1;
ELSE IF OPPON='TULANE' THEN TUL=1;
ELSE IF OPPON='TULSA' THEN TLS=1;
ELSE IF OPPON='UAB' THEN UAB=1;
ELSE IF OPPON='UCLA' THEN ULA=1;
ELSE IF OPPON='UNLV' THEN NLV=1;
ELSE IF OPPON='USC' THEN USC=1;
ELSE IF OPPON='UTAH' THEN UTH=1;
ELSE IF OPPON='UTAH ST.' THEN UTS=1;
ELSE IF OPPON='UTEP' THEN UTP=1;
ELSE IF OPPON='VANDERBILT' THEN VAN=1;
ELSE IF OPPON='VIRGINIA' THEN VIR=1;
ELSE IF OPPON='VIRGINIA TECH' THEN VAT=1;
ELSE IF OPPON='WAKE FOREST' THEN WAK=1;
ELSE IF OPPON='WASHINGTON' THEN WSH=1;
ELSE IF OPPON='WASHINGTON ST.' THEN WAS=1;
ELSE IF OPPON='WEST VIRGINIA' THEN WVA=1;
ELSE IF OPPON='WESTERN MICH.' THEN WMI=1;
ELSE IF OPPON='WISCONSIN' THEN WIS=1;
ELSE IF OPPON='WYOMING' THEN WYO=1;

IF TEAM='AIR FORCE' THEN AIR1=1;
ELSE IF TEAM='AKRON' THEN AKR1=1;
ELSE IF TEAM='ALABAMA' THEN ALA1=1;
ELSE IF TEAM='ARIZONA' THEN ARZ1=1;
ELSE IF TEAM='ARIZONA ST.' THEN AZS1=1;
ELSE IF TEAM='ARKANSAS' THEN ARK1=1;
ELSE IF TEAM='ARKANSAS ST.' THEN ARS1=1;
ELSE IF TEAM='ARMY' THEN AMY1=1;
ELSE IF TEAM='AUBURN' THEN AUB1=1;
ELSE IF TEAM='BALL ST.' THEN BLL1=1;
ELSE IF TEAM='BAYLOR' THEN BYL1=1;
ELSE IF TEAM='BOISE ST.' THEN BOI1=1;
ELSE IF TEAM='BOSTON COLLEGE' THEN BSC1=1;
ELSE IF TEAM='BOWLING GREEN' THEN BWG1=1;
ELSE IF TEAM='BRIGHAM YOUNG' THEN BYU1=1;
ELSE IF TEAM='BUFFALO' THEN BFF1=1;
ELSE IF TEAM='CALIFORNIA' THEN CAL1=1;
ELSE IF TEAM='CENTRAL FLORIDA' THEN CFL1=1;
ELSE IF TEAM='CENTRAL MICHIGAN' THEN CMI1=1;
ELSE IF TEAM='CINCINNATI' THEN CIN1=1;
ELSE IF TEAM='CLEMSON' THEN CLE1=1;
ELSE IF TEAM='COLORADO' THEN COL1=1;
ELSE IF TEAM='COLORADO ST.' THEN CST1=1;
ELSE IF TEAM='CONNECTICUT' THEN CON1=1;
ELSE IF TEAM='DUKE' THEN DUK1=1;
ELSE IF TEAM='EAST CAROLINA' THEN ECA1=1;
ELSE IF TEAM='EASTERN MICH.' THEN EMI1=1;
ELSE IF TEAM='FLORIDA' THEN FLA1=1;
ELSE IF TEAM='FLORIDA ST.' THEN FLS1=1;
ELSE IF TEAM='FRESNO ST.' THEN FRS1=1;
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ELSE IF TEAM='GEORGIA' THEN GEO1=1;
ELSE IF TEAM='GEORGIA TECH' THEN GAT1=1;
ELSE IF TEAM='HAWAII' THEN HAW1=1;
ELSE IF TEAM='HOUSTON' THEN HOU1=1;
ELSE IF TEAM='IDAHO' THEN IDA1=1;
ELSE IF TEAM='ILLINOIS' THEN ILL1=1;
ELSE IF TEAM='INDIANA' THEN IND1=1;
ELSE IF TEAM='IOWA' THEN IOW1=1;
ELSE IF TEAM='IOWA ST.' THEN IAS1=1;
ELSE IF TEAM='KANSAS' THEN KAN1=1;
ELSE IF TEAM='KANSAS ST.' THEN KSS1=1;
ELSE IF TEAM='KENT ST.' THEN KNT1=1;
ELSE IF TEAM='KENTUCKY' THEN KTK1=1;
ELSE IF TEAM='LA-LAFAYETTE' THEN LAL1=1;
ELSE IF TEAM='LOUISIANA TECH' THEN LAT1=1;
ELSE IF TEAM='LOUISIANA-MONROE' THEN LMR1=1;
ELSE IF TEAM='LOUISVILLE' THEN LSV1=1;
ELSE IF TEAM='LSU' THEN LSU1=1;
ELSE IF TEAM='MARSHALL' THEN MSH1=1;
ELSE IF TEAM='MARYLAND' THEN MYL1=1;
ELSE IF TEAM='MEMPHIS' THEN MMP1=1;
ELSE IF TEAM='MIAMI, FLORIDA' THEN MIA1=1;
ELSE IF TEAM='MIAMI, OHIO' THEN MIO1=1;
ELSE IF TEAM='MICHIGAN' THEN MIC1=1;
ELSE IF TEAM='MICHIGAN ST.' THEN MIS1=1;
ELSE IF TEAM='MIDDLE TENN.' THEN MTE1=1;
ELSE IF TEAM='MINNESOTA' THEN MNN1=1;
ELSE IF TEAM='MISSISSIPPI' THEN MSP1=1;
ELSE IF TEAM='MISSISSIPPI ST.' THEN MST1=1;
ELSE IF TEAM='MISSOURI' THEN MSO1=1;
ELSE IF TEAM='NAVY' THEN NVY1=1;
ELSE IF TEAM='NEBRASKA' THEN NEB1=1;
ELSE IF TEAM='NEVADA' THEN NEV1=1;
ELSE IF TEAM='NEW MEXICO' THEN NMX1=1;
ELSE IF TEAM='NEW MEXICO ST.' THEN NMS1=1;
ELSE IF TEAM='NORTH CAROLINA' THEN UNC1=1;
ELSE IF TEAM='NORTH CAROLINA ST.' THEN NCS1=1;
ELSE IF TEAM='NORTH TEXAS' THEN NTX1=1;
ELSE IF TEAM='NORTHERN ILLINOIS' THEN NIL1=1;
ELSE IF TEAM='NORTHWESTERN' THEN NWN1=1;
ELSE IF TEAM='NOTRE DAME' THEN NDM1=1;
ELSE IF TEAM='OHIO ST.' THEN OHS1=1;
ELSE IF TEAM='OHIO U.' THEN OHU1=1;
ELSE IF TEAM='OKLAHOMA' THEN OKU1=1;
ELSE IF TEAM='OKLAHOMA ST.' THEN OKS1=1;
ELSE IF TEAM='OREGON' THEN UOR1=1;
ELSE IF TEAM='OREGON ST.' THEN ORS1=1;
ELSE IF TEAM='PENN ST.' THEN PNS1=1;
ELSE IF TEAM='PITTSBURGH' THEN PIT1=1;
ELSE IF TEAM='PURDUE' THEN PUR1=1;
ELSE IF TEAM='RICE' THEN RIC1=1;
ELSE IF TEAM='RUTGERS' THEN RUT1=1;
ELSE IF TEAM='SAN DIEGO ST.' THEN SDS1=1;
ELSE IF TEAM='SAN JOSE ST.' THEN SJS1=1;
ELSE IF TEAM='SMU' THEN SMU1=1;
ELSE IF TEAM='SOUTH CAROLINA' THEN SCU1=1;
ELSE IF TEAM='SOUTH FLORIDA' THEN SFL1=1;
ELSE IF TEAM='SOUTHERN MISS.' THEN SMI1=1;
ELSE IF TEAM='STANFORD' THEN STF1=1;
ELSE IF TEAM='SYRACUSE' THEN SYR1=1;
ELSE IF TEAM='TCU' THEN TCU1=1;
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ELSE IF TEAM='TEMPLE' THEN TPL1=1;
ELSE IF TEAM='TENNESSEE' THEN TEN1=1;
ELSE IF TEAM='TEXAS' THEN TEX1=1;
ELSE IF TEAM='TEXAS A & M' THEN TAM1=1;
ELSE IF TEAM='TEXAS TECH' THEN TXT1=1;
ELSE IF TEAM='TOLEDO' THEN TOL1=1;
ELSE IF TEAM='TROY ST.' THEN TRY1=1;
ELSE IF TEAM='TULANE' THEN TUL1=1;
ELSE IF TEAM='TULSA' THEN TLS1=1;
ELSE IF TEAM='UAB' THEN UAB1=1;
ELSE IF TEAM='UCLA' THEN ULA1=1;
ELSE IF TEAM='UNLV' THEN NLV1=1;
ELSE IF TEAM='USC' THEN USC1=1;
ELSE IF TEAM='UTAH' THEN UTH1=1;
ELSE IF TEAM='UTAH ST.' THEN UTS1=1;
ELSE IF TEAM='UTEP' THEN UTP1=1;
ELSE IF TEAM='VANDERBILT' THEN VAN1=1;
ELSE IF TEAM='VIRGINIA' THEN VIR1=1;
ELSE IF TEAM='VIRGINIA TECH' THEN VAT1=1;
ELSE IF TEAM='WAKE FOREST' THEN WAK1=1;
ELSE IF TEAM='WASHINGTON' THEN WSH1=1;
ELSE IF TEAM='WASHINGTON ST.' THEN WAS1=1;
ELSE IF TEAM='WEST VIRGINIA' THEN WVA1=1;
ELSE IF TEAM='WESTERN MICH.' THEN WMI1=1;
ELSE IF TEAM='WISCONSIN' THEN WIS1=1;
ELSE IF TEAM='WYOMING' THEN WYO1=1;

%MEND;

%DCODES;

%MACRO CONFS;

IF TEAM='AIR FORCE' THEN MWST=1;
ELSE IF TEAM='AKRON' THEN MIDA=1;
ELSE IF TEAM='ALABAMA' THEN SECO=1;
ELSE IF TEAM='ARIZONA' THEN PTEN=1;
ELSE IF TEAM='ARIZONA ST.' THEN PTEN=1;
ELSE IF TEAM='ARKANSAS' THEN SECO=1;
ELSE IF TEAM='ARKANSAS ST.' THEN SUNB=1;
ELSE IF TEAM='ARMY' THEN CUSA=1;
ELSE IF TEAM='AUBURN' THEN SECO=1;
ELSE IF TEAM='BALL ST.' THEN MIDA=1;
ELSE IF TEAM='BAYLOR' THEN BTWV=1;
ELSE IF TEAM='BOISE ST.' THEN WACO=1;
ELSE IF TEAM='BOSTON COLLEGE' THEN BEST=1;
ELSE IF TEAM='BOWLING GREEN' THEN MIDA=1;
ELSE IF TEAM='BRIGHAM YOUNG' THEN MWST=1;
ELSE IF TEAM='BUFFALO' THEN MIDA=1;
ELSE IF TEAM='CALIFORNIA' THEN PTEN=1;
ELSE IF TEAM='CENTRAL FLORIDA' THEN MIDA=1;
ELSE IF TEAM='CENTRAL MICHIGAN' THEN MIDA=1;
ELSE IF TEAM='CINCINNATI' THEN CUSA=1;
ELSE IF TEAM='CLEMSON' THEN ATCS=1;
ELSE IF TEAM='COLORADO' THEN BTWV=1;
ELSE IF TEAM='COLORADO ST.' THEN MWST=1;
ELSE IF TEAM='CONNECTICUT' THEN INDE=1;
ELSE IF TEAM='DUKE' THEN ATCS=1;
ELSE IF TEAM='EAST CAROLINA' THEN CUSA=1;
ELSE IF TEAM='EASTERN MICH.' THEN MIDA=1;
ELSE IF TEAM='FLORIDA' THEN SECO=1;
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ELSE IF TEAM='FLORIDA ST.' THEN ATCS=1;
ELSE IF TEAM='FRESNO ST.' THEN WACO=1;
ELSE IF TEAM='GEORGIA' THEN SECO=1;
ELSE IF TEAM='GEORGIA TECH' THEN ATCS=1;
ELSE IF TEAM='HAWAII' THEN WACO=1;
ELSE IF TEAM='HOUSTON' THEN CUSA=1;
ELSE IF TEAM='IDAHO' THEN SUNB=1;
ELSE IF TEAM='ILLINOIS' THEN BTEN=1;
ELSE IF TEAM='INDIANA' THEN BTEN=1;
ELSE IF TEAM='IOWA' THEN BTEN=1;
ELSE IF TEAM='IOWA ST.' THEN BTWV=1;
ELSE IF TEAM='KANSAS' THEN BTWV=1;
ELSE IF TEAM='KANSAS ST.' THEN BTWV=1;
ELSE IF TEAM='KENT ST.' THEN MIDA=1;
ELSE IF TEAM='KENTUCKY' THEN SECO=1;
ELSE IF TEAM='LA-LAFAYETTE' THEN SUNB=1;
ELSE IF TEAM='LOUISIANA TECH' THEN WACO=1;
ELSE IF TEAM='LOUISIANA-MONROE' THEN SUNB=1;
ELSE IF TEAM='LOUISVILLE' THEN CUSA=1;
ELSE IF TEAM='LSU' THEN SECO=1;
ELSE IF TEAM='MARSHALL' THEN MIDA=1;
ELSE IF TEAM='MARYLAND' THEN ATCS=1;
ELSE IF TEAM='MEMPHIS' THEN CUSA=1;
ELSE IF TEAM='MIAMI, FLORIDA' THEN BEST=1;
ELSE IF TEAM='MIAMI, OHIO' THEN MIDA=1;
ELSE IF TEAM='MICHIGAN' THEN BTEN=1;
ELSE IF TEAM='MICHIGAN ST.' THEN BTEN=1;
ELSE IF TEAM='MIDDLE TENN.' THEN SUNB=1;
ELSE IF TEAM='MINNESOTA' THEN BTEN=1;
ELSE IF TEAM='MISSISSIPPI' THEN SECO=1;
ELSE IF TEAM='MISSISSIPPI ST.' THEN SECO=1;
ELSE IF TEAM='MISSOURI' THEN BTWV=1;
ELSE IF TEAM='NAVY' THEN INDE=1;
ELSE IF TEAM='NEBRASKA' THEN BTWV=1;
ELSE IF TEAM='NEVADA' THEN WACO=1;
ELSE IF TEAM='NEW MEXICO' THEN MWST=1;
ELSE IF TEAM='NEW MEXICO ST.' THEN SUNB=1;
ELSE IF TEAM='NORTH CAROLINA' THEN ATCS=1;
ELSE IF TEAM='NORTH CAROLINA ST.' THEN ATCS=1;
ELSE IF TEAM='NORTH TEXAS' THEN SUNB=1;
ELSE IF TEAM='NORTHERN ILLINOIS' THEN MIDA=1;
ELSE IF TEAM='NORTHWESTERN' THEN BTEN=1;
ELSE IF TEAM='NOTRE DAME' THEN INDE=1;
ELSE IF TEAM='OHIO ST.' THEN BTEN=1;
ELSE IF TEAM='OHIO U.' THEN MIDA=1;
ELSE IF TEAM='OKLAHOMA' THEN BTWV=1;
ELSE IF TEAM='OKLAHOMA ST.' THEN BTWV=1;
ELSE IF TEAM='OREGON' THEN PTEN=1;
ELSE IF TEAM='OREGON ST.' THEN PTEN=1;
ELSE IF TEAM='PENN ST.' THEN BTEN=1;
ELSE IF TEAM='PITTSBURGH' THEN BEST=1;
ELSE IF TEAM='PURDUE' THEN BTEN=1;
ELSE IF TEAM='RICE' THEN WACO=1;
ELSE IF TEAM='RUTGERS' THEN BEST=1;
ELSE IF TEAM='SAN DIEGO ST.' THEN MWST=1;
ELSE IF TEAM='SAN JOSE ST.' THEN WACO=1;
ELSE IF TEAM='SMU' THEN WACO=1;
ELSE IF TEAM='SOUTH CAROLINA' THEN SECO=1;
ELSE IF TEAM='SOUTH FLORIDA' THEN INDE=1;
ELSE IF TEAM='SOUTHERN MISS.' THEN CUSA=1;
ELSE IF TEAM='STANFORD' THEN PTEN=1;
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ELSE IF TEAM='SYRACUSE' THEN BEST=1;
ELSE IF TEAM='TCU' THEN CUSA=1;
ELSE IF TEAM='TEMPLE' THEN BEST=1;
ELSE IF TEAM='TENNESSEE' THEN SECO=1;
ELSE IF TEAM='TEXAS' THEN BTWV=1;
ELSE IF TEAM='TEXAS A & M' THEN BTWV=1;
ELSE IF TEAM='TEXAS TECH' THEN BTWV=1;
ELSE IF TEAM='TOLEDO' THEN MIDA=1;
ELSE IF TEAM='TROY ST.' THEN INDE=1;
ELSE IF TEAM='TULANE' THEN CUSA=1;
ELSE IF TEAM='TULSA' THEN WACO=1;
ELSE IF TEAM='UAB' THEN CUSA=1;
ELSE IF TEAM='UCLA' THEN PTEN=1;
ELSE IF TEAM='UNLV' THEN MWST=1;
ELSE IF TEAM='USC' THEN PTEN=1;
ELSE IF TEAM='UTAH' THEN MWST=1;
ELSE IF TEAM='UTAH ST.' THEN INDE=1;
ELSE IF TEAM='UTEP' THEN WACO=1;
ELSE IF TEAM='VANDERBILT' THEN SECO=1;
ELSE IF TEAM='VIRGINIA' THEN ATCS=1;
ELSE IF TEAM='VIRGINIA TECH' THEN BEST=1;
ELSE IF TEAM='WAKE FOREST' THEN ATCS=1;
ELSE IF TEAM='WASHINGTON' THEN PTEN=1;
ELSE IF TEAM='WASHINGTON ST.' THEN PTEN=1;
ELSE IF TEAM='WEST VIRGINIA' THEN BEST=1;
ELSE IF TEAM='WESTERN MICH.' THEN MIDA=1;
ELSE IF TEAM='WISCONSIN' THEN BTEN=1;
ELSE IF TEAM='WYOMING' THEN MWST=1;

%MEND;

%CONFS;

%MACRO NULLING;

*** NULLIFYING TEAMS TO AVOID SINGULARITY;

AIR=0;
AKR=0;
ALA=0;
ARZ=0;
ARS=0;
AMY=0;
BYL=0;
BOI=0;
BSC=0;
CFL=0;
CLE=0;
ILL=0;

INDE=0;

%MEND;

*  %NULLING;

***************;

%MACRO PROG;

PROC TRANSPOSE DATA=EST OUT=SASOUT.RESULT;
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*PROC PRINT DATA=SASOUT.RESULT;

***************;

PROC TRANSPOSE DATA=SASOUT.RESULT OUT=RESULT;

PROC SORT DATA=SASOUT.FOOT;
 BY TEAM;

PROC SUMMARY DATA=SASOUT.FOOT;
 BY TEAM;
 VAR WIN LOSS;
 OUTPUT OUT=SCORE SUM=;

DATA MEDIAS;
 SET SASOUT.MEDIA01;
 TRIGGER=MAX(1,MIN(17,INT((&WK-'13AUG2001'D)/7)));
 IF WEEKNUM=TRIGGER;
 WAP2=WAP;
 WESPN2=WESPN;
 KEEP TEAM WAP2 WESPN2;

  *PROC PRINT;

DATA SCORE;
 MERGE SCORE MEDIAS;
 BY TEAM;
 MERGEV=1;

 KEEP TEAM WIN LOSS WAP2 WESPN2 MERGEV;

PROC SORT;
 BY TEAM;

DATA RESULT;
 SET RESULT;
 MERGEV=1;

DATA RESULT;
 MERGE RESULT SCORE;
 BY MERGEV;

DATA RESULT;
 SET RESULT;

 OFFS=0;
 DEFS=0;

IF AIR=. THEN AIR=0;
IF AKR=. THEN AKR=0;
IF ALA=. THEN ALA=0;
IF ARZ=. THEN ARZ=0;
IF AZS=. THEN AZS=0;
IF ARK=. THEN ARK=0;
IF ARS=. THEN ARS=0;
IF AMY=. THEN AMY=0;
IF AUB=. THEN AUB=0;
IF BLL=. THEN BLL=0;
IF BYL=. THEN BYL=0;
IF BOI=. THEN BOI=0;
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IF BSC=. THEN BSC=0;
IF BWG=. THEN BWG=0;
IF BYU=. THEN BYU=0;
IF BFF=. THEN BFF=0;
IF CAL=. THEN CAL=0;
IF CFL=. THEN CFL=0;
IF CMI=. THEN CMI=0;
IF CIN=. THEN CIN=0;
IF CLE=. THEN CLE=0;
IF COL=. THEN COL=0;
IF CST=. THEN CST=0;
IF CON=. THEN CON=0;
IF DUK=. THEN DUK=0;
IF ECA=. THEN ECA=0;
IF EMI=. THEN EMI=0;
IF FLA=. THEN FLA=0;
IF FLS=. THEN FLS=0;
IF FRS=. THEN FRS=0;
IF GEO=. THEN GEO=0;
IF GAT=. THEN GAT=0;
IF HAW=. THEN HAW=0;
IF HOU=. THEN HOU=0;
IF IDA=. THEN IDA=0;
IF ILL=. THEN ILL=0;
IF IND=. THEN IND=0;
IF IOW=. THEN IOW=0;
IF IAS=. THEN IAS=0;
IF KAN=. THEN KAN=0;
IF KSS=. THEN KSS=0;
IF KNT=. THEN KNT=0;
IF KTK=. THEN KTK=0;
IF LAL=. THEN LAL=0;
IF LAT=. THEN LAT=0;
IF LMR=. THEN LMR=0;
IF LSV=. THEN LSV=0;
IF LSU=. THEN LSU=0;
IF MSH=. THEN MSH=0;
IF MYL=. THEN MYL=0;
IF MMP=. THEN MMP=0;
IF MIA=. THEN MIA=0;
IF MIO=. THEN MIO=0;
IF MIC=. THEN MIC=0;
IF MIS=. THEN MIS=0;
IF MTE=. THEN MTE=0;
IF MNN=. THEN MNN=0;
IF MSP=. THEN MSP=0;
IF MST=. THEN MST=0;
IF MSO=. THEN MSO=0;
IF NVY=. THEN NVY=0;
IF NEB=. THEN NEB=0;
IF NEV=. THEN NEV=0;
IF NMX=. THEN NMX=0;
IF NMS=. THEN NMS=0;
IF UNC=. THEN UNC=0;
IF NCS=. THEN NCS=0;
IF NTX=. THEN NTX=0;
IF NIL=. THEN NIL=0;
IF NWN=. THEN NWN=0;
IF NDM=. THEN NDM=0;
IF OHS=. THEN OHS=0;
IF OHU=. THEN OHU=0;
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IF OKU=. THEN OKU=0;
IF OKS=. THEN OKS=0;
IF UOR=. THEN UOR=0;
IF ORS=. THEN ORS=0;
IF PNS=. THEN PNS=0;
IF PIT=. THEN PIT=0;
IF PUR=. THEN PUR=0;
IF RIC=. THEN RIC=0;
IF RUT=. THEN RUT=0;
IF SDS=. THEN SDS=0;
IF SJS=. THEN SJS=0;
IF SMU=. THEN SMU=0;
IF SCU=. THEN SCU=0;
IF SFL=. THEN SFL=0;
IF SMI=. THEN SMI=0;
IF STF=. THEN STF=0;
IF SYR=. THEN SYR=0;
IF TCU=. THEN TCU=0;
IF TPL=. THEN TPL=0;
IF TEN=. THEN TEN=0;
IF TEX=. THEN TEX=0;
IF TAM=. THEN TAM=0;
IF TXT=. THEN TXT=0;
IF TOL=. THEN TOL=0;
IF TRY=. THEN TRY=0;
IF TUL=. THEN TUL=0;
IF TLS=. THEN TLS=0;
IF UAB=. THEN UAB=0;
IF ULA=. THEN ULA=0;
IF NLV=. THEN NLV=0;
IF USC=. THEN USC=0;
IF UTH=. THEN UTH=0;
IF UTS=. THEN UTS=0;
IF UTP=. THEN UTP=0;
IF VAN=. THEN VAN=0;
IF VIR=. THEN VIR=0;
IF VAT=. THEN VAT=0;
IF WAK=. THEN WAK=0;
IF WSH=. THEN WSH=0;
IF WAS=. THEN WAS=0;
IF WVA=. THEN WVA=0;
IF WMI=. THEN WMI=0;
IF WIS=. THEN WIS=0;
IF WYO=. THEN WYO=0;

IF AIR1=. THEN AIR1=0;
IF AKR1=. THEN AKR1=0;
IF ALA1=. THEN ALA1=0;
IF ARZ1=. THEN ARZ1=0;
IF AZS1=. THEN AZS1=0;
IF ARK1=. THEN ARK1=0;
IF ARS1=. THEN ARS1=0;
IF AMY1=. THEN AMY1=0;
IF AUB1=. THEN AUB1=0;
IF BLL1=. THEN BLL1=0;
IF BYL1=. THEN BYL1=0;
IF BOI1=. THEN BOI1=0;
IF BSC1=. THEN BSC1=0;
IF BWG1=. THEN BWG1=0;
IF BYU1=. THEN BYU1=0;
IF BFF1=. THEN BFF1=0;
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IF CAL1=. THEN CAL1=0;
IF CFL1=. THEN CFL1=0;
IF CMI1=. THEN CMI1=0;
IF CIN1=. THEN CIN1=0;
IF CLE1=. THEN CLE1=0;
IF COL1=. THEN COL1=0;
IF CST1=. THEN CST1=0;
IF CON1=. THEN CON1=0;
IF DUK1=. THEN DUK1=0;
IF ECA1=. THEN ECA1=0;
IF EMI1=. THEN EMI1=0;
IF FLA1=. THEN FLA1=0;
IF FLS1=. THEN FLS1=0;
IF FRS1=. THEN FRS1=0;
IF GEO1=. THEN GEO1=0;
IF GAT1=. THEN GAT1=0;
IF HAW1=. THEN HAW1=0;
IF HOU1=. THEN HOU1=0;
IF IDA1=. THEN IDA1=0;
IF ILL1=. THEN ILL1=0;
IF IND1=. THEN IND1=0;
IF IOW1=. THEN IOW1=0;
IF IAS1=. THEN IAS1=0;
IF KAN1=. THEN KAN1=0;
IF KSS1=. THEN KSS1=0;
IF KNT1=. THEN KNT1=0;
IF KTK1=. THEN KTK1=0;
IF LAL1=. THEN LAL1=0;
IF LAT1=. THEN LAT1=0;
IF LMR1=. THEN LMR1=0;
IF LSV1=. THEN LSV1=0;
IF LSU1=. THEN LSU1=0;
IF MSH1=. THEN MSH1=0;
IF MYL1=. THEN MYL1=0;
IF MMP1=. THEN MMP1=0;
IF MIA1=. THEN MIA1=0;
IF MIO1=. THEN MIO1=0;
IF MIC1=. THEN MIC1=0;
IF MIS1=. THEN MIS1=0;
IF MTE1=. THEN MTE1=0;
IF MNN1=. THEN MNN1=0;
IF MSP1=. THEN MSP1=0;
IF MST1=. THEN MST1=0;
IF MSO1=. THEN MSO1=0;
IF NVY1=. THEN NVY1=0;
IF NEB1=. THEN NEB1=0;
IF NEV1=. THEN NEV1=0;
IF NMX1=. THEN NMX1=0;
IF NMS1=. THEN NMS1=0;
IF UNC1=. THEN UNC1=0;
IF NCS1=. THEN NCS1=0;
IF NTX1=. THEN NTX1=0;
IF NIL1=. THEN NIL1=0;
IF NWN1=. THEN NWN1=0;
IF NDM1=. THEN NDM1=0;
IF OHS1=. THEN OHS1=0;
IF OHU1=. THEN OHU1=0;
IF OKU1=. THEN OKU1=0;
IF OKS1=. THEN OKS1=0;
IF UOR1=. THEN UOR1=0;
IF ORS1=. THEN ORS1=0;
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IF PNS1=. THEN PNS1=0;
IF PIT1=. THEN PIT1=0;
IF PUR1=. THEN PUR1=0;
IF RIC1=. THEN RIC1=0;
IF RUT1=. THEN RUT1=0;
IF SDS1=. THEN SDS1=0;
IF SJS1=. THEN SJS1=0;
IF SMU1=. THEN SMU1=0;
IF SCU1=. THEN SCU1=0;
IF SFL1=. THEN SFL1=0;
IF SMI1=. THEN SMI1=0;
IF STF1=. THEN STF1=0;
IF SYR1=. THEN SYR1=0;
IF TCU1=. THEN TCU1=0;
IF TPL1=. THEN TPL1=0;
IF TEN1=. THEN TEN1=0;
IF TEX1=. THEN TEX1=0;
IF TAM1=. THEN TAM1=0;
IF TXT1=. THEN TXT1=0;
IF TOL1=. THEN TOL1=0;
IF TRY1=. THEN TRY1=0;
IF TUL1=. THEN TUL1=0;
IF TLS1=. THEN TLS1=0;
IF UAB1=. THEN UAB1=0;
IF ULA1=. THEN ULA1=0;
IF NLV1=. THEN NLV1=0;
IF USC1=. THEN USC1=0;
IF UTH1=. THEN UTH1=0;
IF UTS1=. THEN UTS1=0;
IF UTP1=. THEN UTP1=0;
IF VAN1=. THEN VAN1=0;
IF VIR1=. THEN VIR1=0;
IF VAT1=. THEN VAT1=0;
IF WAK1=. THEN WAK1=0;
IF WSH1=. THEN WSH1=0;
IF WAS1=. THEN WAS1=0;
IF WVA1=. THEN WVA1=0;
IF WMI1=. THEN WMI1=0;
IF WIS1=. THEN WIS1=0;
IF WYO1=. THEN WYO1=0;

IF ATCS=. THEN ATCS=0;
IF BEST=. THEN BEST=0;
IF BTEN=. THEN BTEN=0;
IF BTWV=. THEN BTWV=0;
IF CUSA=. THEN CUSA=0;
IF INDE=. THEN INDE=0;
IF MIDA=. THEN MIDA=0;
IF MWST=. THEN MWST=0;
IF PTEN=. THEN PTEN=0;
IF SECO=. THEN SECO=0;
IF WACO=. THEN WACO=0;
IF SUNB=. THEN SUNB=0;

IF TEAM='AIR FORCE' THEN DEFS=DEFS+AIR;
ELSE IF TEAM='AKRON' THEN DEFS=DEFS+AKR;
ELSE IF TEAM='ALABAMA' THEN DEFS=DEFS+ALA;
ELSE IF TEAM='ARIZONA' THEN DEFS=DEFS+ARZ;
ELSE IF TEAM='ARIZONA ST.' THEN DEFS=DEFS+AZS;
ELSE IF TEAM='ARKANSAS' THEN DEFS=DEFS+ARK;
ELSE IF TEAM='ARKANSAS ST.' THEN DEFS=DEFS+ARS;
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ELSE IF TEAM='ARMY' THEN DEFS=DEFS+AMY;
ELSE IF TEAM='AUBURN' THEN DEFS=DEFS+AUB;
ELSE IF TEAM='BALL ST.' THEN DEFS=DEFS+BLL;
ELSE IF TEAM='BAYLOR' THEN DEFS=DEFS+BYL;
ELSE IF TEAM='BOISE ST.' THEN DEFS=DEFS+BOI;
ELSE IF TEAM='BOSTON COLLEGE' THEN DEFS=DEFS+BSC;
ELSE IF TEAM='BOWLING GREEN' THEN DEFS=DEFS+BWG;
ELSE IF TEAM='BRIGHAM YOUNG' THEN DEFS=DEFS+BYU;
ELSE IF TEAM='BUFFALO' THEN DEFS=DEFS+BFF;
ELSE IF TEAM='CALIFORNIA' THEN DEFS=DEFS+CAL;
ELSE IF TEAM='CENTRAL FLORIDA' THEN DEFS=DEFS+CFL;
ELSE IF TEAM='CENTRAL MICHIGAN' THEN DEFS=DEFS+CMI;
ELSE IF TEAM='CINCINNATI' THEN DEFS=DEFS+CIN;
ELSE IF TEAM='CLEMSON' THEN DEFS=DEFS+CLE;
ELSE IF TEAM='COLORADO' THEN DEFS=DEFS+COL;
ELSE IF TEAM='COLORADO ST.' THEN DEFS=DEFS+CST;
ELSE IF TEAM='CONNECTICUT' THEN DEFS=DEFS+CON;
ELSE IF TEAM='DUKE' THEN DEFS=DEFS+DUK;
ELSE IF TEAM='EAST CAROLINA' THEN DEFS=DEFS+ECA;
ELSE IF TEAM='EASTERN MICH.' THEN DEFS=DEFS+EMI;
ELSE IF TEAM='FLORIDA' THEN DEFS=DEFS+FLA;
ELSE IF TEAM='FLORIDA ST.' THEN DEFS=DEFS+FLS;
ELSE IF TEAM='FRESNO ST.' THEN DEFS=DEFS+FRS;
ELSE IF TEAM='GEORGIA' THEN DEFS=DEFS+GEO;
ELSE IF TEAM='GEORGIA TECH' THEN DEFS=DEFS+GAT;
ELSE IF TEAM='HAWAII' THEN DEFS=DEFS+HAW;
ELSE IF TEAM='HOUSTON' THEN DEFS=DEFS+HOU;
ELSE IF TEAM='IDAHO' THEN DEFS=DEFS+IDA;
ELSE IF TEAM='ILLINOIS' THEN DEFS=DEFS+ILL;
ELSE IF TEAM='INDIANA' THEN DEFS=DEFS+IND;
ELSE IF TEAM='IOWA' THEN DEFS=DEFS+IOW;
ELSE IF TEAM='IOWA ST.' THEN DEFS=DEFS+IAS;
ELSE IF TEAM='KANSAS' THEN DEFS=DEFS+KAN;
ELSE IF TEAM='KANSAS ST.' THEN DEFS=DEFS+KSS;
ELSE IF TEAM='KENT ST.' THEN DEFS=DEFS+KNT;
ELSE IF TEAM='KENTUCKY' THEN DEFS=DEFS+KTK;
ELSE IF TEAM='LA-LAFAYETTE' THEN DEFS=DEFS+LAL;
ELSE IF TEAM='LOUISIANA TECH' THEN DEFS=DEFS+LAT;
ELSE IF TEAM='LOUISIANA-MONROE' THEN DEFS=DEFS+LMR;
ELSE IF TEAM='LOUISVILLE' THEN DEFS=DEFS+LSV;
ELSE IF TEAM='LSU' THEN DEFS=DEFS+LSU;
ELSE IF TEAM='MARSHALL' THEN DEFS=DEFS+MSH;
ELSE IF TEAM='MARYLAND' THEN DEFS=DEFS+MYL;
ELSE IF TEAM='MEMPHIS' THEN DEFS=DEFS+MMP;
ELSE IF TEAM='MIAMI, FLORIDA' THEN DEFS=DEFS+MIA;
ELSE IF TEAM='MIAMI, OHIO' THEN DEFS=DEFS+MIO;
ELSE IF TEAM='MICHIGAN' THEN DEFS=DEFS+MIC;
ELSE IF TEAM='MICHIGAN ST.' THEN DEFS=DEFS+MIS;
ELSE IF TEAM='MIDDLE TENN.' THEN DEFS=DEFS+MTE;
ELSE IF TEAM='MINNESOTA' THEN DEFS=DEFS+MNN;
ELSE IF TEAM='MISSISSIPPI' THEN DEFS=DEFS+MSP;
ELSE IF TEAM='MISSISSIPPI ST.' THEN DEFS=DEFS+MST;
ELSE IF TEAM='MISSOURI' THEN DEFS=DEFS+MSO;
ELSE IF TEAM='NAVY' THEN DEFS=DEFS+NVY;
ELSE IF TEAM='NEBRASKA' THEN DEFS=DEFS+NEB;
ELSE IF TEAM='NEVADA' THEN DEFS=DEFS+NEV;
ELSE IF TEAM='NEW MEXICO' THEN DEFS=DEFS+NMX;
ELSE IF TEAM='NEW MEXICO ST.' THEN DEFS=DEFS+NMS;
ELSE IF TEAM='NORTH CAROLINA' THEN DEFS=DEFS+UNC;
ELSE IF TEAM='NORTH CAROLINA ST.' THEN DEFS=DEFS+NCS;
ELSE IF TEAM='NORTH TEXAS' THEN DEFS=DEFS+NTX;
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ELSE IF TEAM='NORTHERN ILLINOIS' THEN DEFS=DEFS+NIL;
ELSE IF TEAM='NORTHWESTERN' THEN DEFS=DEFS+NWN;
ELSE IF TEAM='NOTRE DAME' THEN DEFS=DEFS+NDM;
ELSE IF TEAM='OHIO ST.' THEN DEFS=DEFS+OHS;
ELSE IF TEAM='OHIO U.' THEN DEFS=DEFS+OHU;
ELSE IF TEAM='OKLAHOMA' THEN DEFS=DEFS+OKU;
ELSE IF TEAM='OKLAHOMA ST.' THEN DEFS=DEFS+OKS;
ELSE IF TEAM='OREGON' THEN DEFS=DEFS+UOR;
ELSE IF TEAM='OREGON ST.' THEN DEFS=DEFS+ORS;
ELSE IF TEAM='PENN ST.' THEN DEFS=DEFS+PNS;
ELSE IF TEAM='PITTSBURGH' THEN DEFS=DEFS+PIT;
ELSE IF TEAM='PURDUE' THEN DEFS=DEFS+PUR;
ELSE IF TEAM='RICE' THEN DEFS=DEFS+RIC;
ELSE IF TEAM='RUTGERS' THEN DEFS=DEFS+RUT;
ELSE IF TEAM='SAN DIEGO ST.' THEN DEFS=DEFS+SDS;
ELSE IF TEAM='SAN JOSE ST.' THEN DEFS=DEFS+SJS;
ELSE IF TEAM='SMU' THEN DEFS=DEFS+SMU;
ELSE IF TEAM='SOUTH CAROLINA' THEN DEFS=DEFS+SCU;
ELSE IF TEAM='SOUTH FLORIDA' THEN DEFS=DEFS+SFL;
ELSE IF TEAM='SOUTHERN MISS.' THEN DEFS=DEFS+SMI;
ELSE IF TEAM='STANFORD' THEN DEFS=DEFS+STF;
ELSE IF TEAM='SYRACUSE' THEN DEFS=DEFS+SYR;
ELSE IF TEAM='TCU' THEN DEFS=DEFS+TCU;
ELSE IF TEAM='TEMPLE' THEN DEFS=DEFS+TPL;
ELSE IF TEAM='TENNESSEE' THEN DEFS=DEFS+TEN;
ELSE IF TEAM='TEXAS' THEN DEFS=DEFS+TEX;
ELSE IF TEAM='TEXAS A & M' THEN DEFS=DEFS+TAM;
ELSE IF TEAM='TEXAS TECH' THEN DEFS=DEFS+TXT;
ELSE IF TEAM='TOLEDO' THEN DEFS=DEFS+TOL;
ELSE IF TEAM='TROY ST.' THEN DEFS=DEFS+TRY;
ELSE IF TEAM='TULANE' THEN DEFS=DEFS+TUL;
ELSE IF TEAM='TULSA' THEN DEFS=DEFS+TLS;
ELSE IF TEAM='UAB' THEN DEFS=DEFS+UAB;
ELSE IF TEAM='UCLA' THEN DEFS=DEFS+ULA;
ELSE IF TEAM='UNLV' THEN DEFS=DEFS+NLV;
ELSE IF TEAM='USC' THEN DEFS=DEFS+USC;
ELSE IF TEAM='UTAH' THEN DEFS=DEFS+UTH;
ELSE IF TEAM='UTAH ST.' THEN DEFS=DEFS+UTS;
ELSE IF TEAM='UTEP' THEN DEFS=DEFS+UTP;
ELSE IF TEAM='VANDERBILT' THEN DEFS=DEFS+VAN;
ELSE IF TEAM='VIRGINIA' THEN DEFS=DEFS+VIR;
ELSE IF TEAM='VIRGINIA TECH' THEN DEFS=DEFS+VAT;
ELSE IF TEAM='WAKE FOREST' THEN DEFS=DEFS+WAK;
ELSE IF TEAM='WASHINGTON' THEN DEFS=DEFS+WSH;
ELSE IF TEAM='WASHINGTON ST.' THEN DEFS=DEFS+WAS;
ELSE IF TEAM='WEST VIRGINIA' THEN DEFS=DEFS+WVA;
ELSE IF TEAM='WESTERN MICH.' THEN DEFS=DEFS+WMI;
ELSE IF TEAM='WISCONSIN' THEN DEFS=DEFS+WIS;
ELSE IF TEAM='WYOMING' THEN DEFS=DEFS+WYO;

IF TEAM='AIR FORCE' THEN OFFS=OFFS+AIR1;
ELSE IF TEAM='AKRON' THEN OFFS=OFFS+AKR1;
ELSE IF TEAM='ALABAMA' THEN OFFS=OFFS+ALA1;
ELSE IF TEAM='ARIZONA' THEN OFFS=OFFS+ARZ1;
ELSE IF TEAM='ARIZONA ST.' THEN OFFS=OFFS+AZS1;
ELSE IF TEAM='ARKANSAS' THEN OFFS=OFFS+ARK1;
ELSE IF TEAM='ARKANSAS ST.' THEN OFFS=OFFS+ARS1;
ELSE IF TEAM='ARMY' THEN OFFS=OFFS+AMY1;
ELSE IF TEAM='AUBURN' THEN OFFS=OFFS+AUB1;
ELSE IF TEAM='BALL ST.' THEN OFFS=OFFS+BLL1;
ELSE IF TEAM='BAYLOR' THEN OFFS=OFFS+BYL1;
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ELSE IF TEAM='BOISE ST.' THEN OFFS=OFFS+BOI1;
ELSE IF TEAM='BOSTON COLLEGE' THEN OFFS=OFFS+BSC1;
ELSE IF TEAM='BOWLING GREEN' THEN OFFS=OFFS+BWG1;
ELSE IF TEAM='BRIGHAM YOUNG' THEN OFFS=OFFS+BYU1;
ELSE IF TEAM='BUFFALO' THEN OFFS=OFFS+BFF1;
ELSE IF TEAM='CALIFORNIA' THEN OFFS=OFFS+CAL1;
ELSE IF TEAM='CENTRAL FLORIDA' THEN OFFS=OFFS+CFL1;
ELSE IF TEAM='CENTRAL MICHIGAN' THEN OFFS=OFFS+CMI1;
ELSE IF TEAM='CINCINNATI' THEN OFFS=OFFS+CIN1;
ELSE IF TEAM='CLEMSON' THEN OFFS=OFFS+CLE1;
ELSE IF TEAM='COLORADO' THEN OFFS=OFFS+COL1;
ELSE IF TEAM='COLORADO ST.' THEN OFFS=OFFS+CST1;
ELSE IF TEAM='CONNECTICUT' THEN OFFS=OFFS+CON1;
ELSE IF TEAM='DUKE' THEN OFFS=OFFS+DUK1;
ELSE IF TEAM='EAST CAROLINA' THEN OFFS=OFFS+ECA1;
ELSE IF TEAM='EASTERN MICH.' THEN OFFS=OFFS+EMI1;
ELSE IF TEAM='FLORIDA' THEN OFFS=OFFS+FLA1;
ELSE IF TEAM='FLORIDA ST.' THEN OFFS=OFFS+FLS1;
ELSE IF TEAM='FRESNO ST.' THEN OFFS=OFFS+FRS1;
ELSE IF TEAM='GEORGIA' THEN OFFS=OFFS+GEO1;
ELSE IF TEAM='GEORGIA TECH' THEN OFFS=OFFS+GAT1;
ELSE IF TEAM='HAWAII' THEN OFFS=OFFS+HAW1;
ELSE IF TEAM='HOUSTON' THEN OFFS=OFFS+HOU1;
ELSE IF TEAM='IDAHO' THEN OFFS=OFFS+IDA1;
ELSE IF TEAM='ILLINOIS' THEN OFFS=OFFS+ILL1;
ELSE IF TEAM='INDIANA' THEN OFFS=OFFS+IND1;
ELSE IF TEAM='IOWA' THEN OFFS=OFFS+IOW1;
ELSE IF TEAM='IOWA ST.' THEN OFFS=OFFS+IAS1;
ELSE IF TEAM='KANSAS' THEN OFFS=OFFS+KAN1;
ELSE IF TEAM='KANSAS ST.' THEN OFFS=OFFS+KSS1;
ELSE IF TEAM='KENT ST.' THEN OFFS=OFFS+KNT1;
ELSE IF TEAM='KENTUCKY' THEN OFFS=OFFS+KTK1;
ELSE IF TEAM='LA-LAFAYETTE' THEN OFFS=OFFS+LAL1;
ELSE IF TEAM='LOUISIANA TECH' THEN OFFS=OFFS+LAT1;
ELSE IF TEAM='LOUISIANA-MONROE' THEN OFFS=OFFS+LMR1;
ELSE IF TEAM='LOUISVILLE' THEN OFFS=OFFS+LSV1;
ELSE IF TEAM='LSU' THEN OFFS=OFFS+LSU1;
ELSE IF TEAM='MARSHALL' THEN OFFS=OFFS+MSH1;
ELSE IF TEAM='MARYLAND' THEN OFFS=OFFS+MYL1;
ELSE IF TEAM='MEMPHIS' THEN OFFS=OFFS+MMP1;
ELSE IF TEAM='MIAMI, FLORIDA' THEN OFFS=OFFS+MIA1;
ELSE IF TEAM='MIAMI, OHIO' THEN OFFS=OFFS+MIO1;
ELSE IF TEAM='MICHIGAN' THEN OFFS=OFFS+MIC1;
ELSE IF TEAM='MICHIGAN ST.' THEN OFFS=OFFS+MIS1;
ELSE IF TEAM='MIDDLE TENN.' THEN OFFS=OFFS+MTE1;
ELSE IF TEAM='MINNESOTA' THEN OFFS=OFFS+MNN1;
ELSE IF TEAM='MISSISSIPPI' THEN OFFS=OFFS+MSP1;
ELSE IF TEAM='MISSISSIPPI ST.' THEN OFFS=OFFS+MST1;
ELSE IF TEAM='MISSOURI' THEN OFFS=OFFS+MSO1;
ELSE IF TEAM='NAVY' THEN OFFS=OFFS+NVY1;
ELSE IF TEAM='NEBRASKA' THEN OFFS=OFFS+NEB1;
ELSE IF TEAM='NEVADA' THEN OFFS=OFFS+NEV1;
ELSE IF TEAM='NEW MEXICO' THEN OFFS=OFFS+NMX1;
ELSE IF TEAM='NEW MEXICO ST.' THEN OFFS=OFFS+NMS1;
ELSE IF TEAM='NORTH CAROLINA' THEN OFFS=OFFS+UNC1;
ELSE IF TEAM='NORTH CAROLINA ST.' THEN OFFS=OFFS+NCS1;
ELSE IF TEAM='NORTH TEXAS' THEN OFFS=OFFS+NTX1;
ELSE IF TEAM='NORTHERN ILLINOIS' THEN OFFS=OFFS+NIL1;
ELSE IF TEAM='NORTHWESTERN' THEN OFFS=OFFS+NWN1;
ELSE IF TEAM='NOTRE DAME' THEN OFFS=OFFS+NDM1;
ELSE IF TEAM='OHIO ST.' THEN OFFS=OFFS+OHS1;
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ELSE IF TEAM='OHIO U.' THEN OFFS=OFFS+OHU1;
ELSE IF TEAM='OKLAHOMA' THEN OFFS=OFFS+OKU1;
ELSE IF TEAM='OKLAHOMA ST.' THEN OFFS=OFFS+OKS1;
ELSE IF TEAM='OREGON' THEN OFFS=OFFS+UOR1;
ELSE IF TEAM='OREGON ST.' THEN OFFS=OFFS+ORS1;
ELSE IF TEAM='PENN ST.' THEN OFFS=OFFS+PNS1;
ELSE IF TEAM='PITTSBURGH' THEN OFFS=OFFS+PIT1;
ELSE IF TEAM='PURDUE' THEN OFFS=OFFS+PUR1;
ELSE IF TEAM='RICE' THEN OFFS=OFFS+RIC1;
ELSE IF TEAM='RUTGERS' THEN OFFS=OFFS+RUT1;
ELSE IF TEAM='SAN DIEGO ST.' THEN OFFS=OFFS+SDS1;
ELSE IF TEAM='SAN JOSE ST.' THEN OFFS=OFFS+SJS1;
ELSE IF TEAM='SMU' THEN OFFS=OFFS+SMU1;
ELSE IF TEAM='SOUTH CAROLINA' THEN OFFS=OFFS+SCU1;
ELSE IF TEAM='SOUTH FLORIDA' THEN OFFS=OFFS+SFL1;
ELSE IF TEAM='SOUTHERN MISS.' THEN OFFS=OFFS+SMI1;
ELSE IF TEAM='STANFORD' THEN OFFS=OFFS+STF1;
ELSE IF TEAM='SYRACUSE' THEN OFFS=OFFS+SYR1;
ELSE IF TEAM='TCU' THEN OFFS=OFFS+TCU1;
ELSE IF TEAM='TEMPLE' THEN OFFS=OFFS+TPL1;
ELSE IF TEAM='TENNESSEE' THEN OFFS=OFFS+TEN1;
ELSE IF TEAM='TEXAS' THEN OFFS=OFFS+TEX1;
ELSE IF TEAM='TEXAS A & M' THEN OFFS=OFFS+TAM1;
ELSE IF TEAM='TEXAS TECH' THEN OFFS=OFFS+TXT1;
ELSE IF TEAM='TOLEDO' THEN OFFS=OFFS+TOL1;
ELSE IF TEAM='TROY ST.' THEN OFFS=OFFS+TRY1;
ELSE IF TEAM='TULANE' THEN OFFS=OFFS+TUL1;
ELSE IF TEAM='TULSA' THEN OFFS=OFFS+TLS1;
ELSE IF TEAM='UAB' THEN OFFS=OFFS+UAB1;
ELSE IF TEAM='UCLA' THEN OFFS=OFFS+ULA1;
ELSE IF TEAM='UNLV' THEN OFFS=OFFS+NLV1;
ELSE IF TEAM='USC' THEN OFFS=OFFS+USC1;
ELSE IF TEAM='UTAH' THEN OFFS=OFFS+UTH1;
ELSE IF TEAM='UTAH ST.' THEN OFFS=OFFS+UTS1;
ELSE IF TEAM='UTEP' THEN OFFS=OFFS+UTP1;
ELSE IF TEAM='VANDERBILT' THEN OFFS=OFFS+VAN1;
ELSE IF TEAM='VIRGINIA' THEN OFFS=OFFS+VIR1;
ELSE IF TEAM='VIRGINIA TECH' THEN OFFS=OFFS+VAT1;
ELSE IF TEAM='WAKE FOREST' THEN OFFS=OFFS+WAK1;
ELSE IF TEAM='WASHINGTON' THEN OFFS=OFFS+WSH1;
ELSE IF TEAM='WASHINGTON ST.' THEN OFFS=OFFS+WAS1;
ELSE IF TEAM='WEST VIRGINIA' THEN OFFS=OFFS+WVA1;
ELSE IF TEAM='WESTERN MICH.' THEN OFFS=OFFS+WMI1;
ELSE IF TEAM='WISCONSIN' THEN OFFS=OFFS+WIS1;
ELSE IF TEAM='WYOMING' THEN OFFS=OFFS+WYO1;

IF TEAM='AIR FORCE' THEN OFFS=OFFS+MWST;
ELSE IF TEAM='AKRON' THEN OFFS=OFFS+MIDA;
ELSE IF TEAM='ALABAMA' THEN OFFS=OFFS+SECO;
ELSE IF TEAM='ARIZONA' THEN OFFS=OFFS+PTEN;
ELSE IF TEAM='ARIZONA ST.' THEN OFFS=OFFS+PTEN;
ELSE IF TEAM='ARKANSAS' THEN OFFS=OFFS+SECO;
ELSE IF TEAM='ARKANSAS ST.' THEN OFFS=OFFS+SUNB;
ELSE IF TEAM='ARMY' THEN OFFS=OFFS+CUSA;
ELSE IF TEAM='AUBURN' THEN OFFS=OFFS+SECO;
ELSE IF TEAM='BALL ST.' THEN OFFS=OFFS+MIDA;
ELSE IF TEAM='BAYLOR' THEN OFFS=OFFS+BTWV;
ELSE IF TEAM='BOISE ST.' THEN OFFS=OFFS+WACO;
ELSE IF TEAM='BOSTON COLLEGE' THEN OFFS=OFFS+BEST;
ELSE IF TEAM='BOWLING GREEN' THEN OFFS=OFFS+MIDA;
ELSE IF TEAM='BRIGHAM YOUNG' THEN OFFS=OFFS+MWST;
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ELSE IF TEAM='BUFFALO' THEN OFFS=OFFS+MIDA;
ELSE IF TEAM='CALIFORNIA' THEN OFFS=OFFS+PTEN;
ELSE IF TEAM='CENTRAL FLORIDA' THEN OFFS=OFFS+MIDA;
ELSE IF TEAM='CENTRAL MICHIGAN' THEN OFFS=OFFS+MIDA;
ELSE IF TEAM='CINCINNATI' THEN OFFS=OFFS+CUSA;
ELSE IF TEAM='CLEMSON' THEN OFFS=OFFS+ATCS;
ELSE IF TEAM='COLORADO' THEN OFFS=OFFS+BTWV;
ELSE IF TEAM='COLORADO ST.' THEN OFFS=OFFS+MWST;
ELSE IF TEAM='CONNECTICUT' THEN OFFS=OFFS+INDE;
ELSE IF TEAM='DUKE' THEN OFFS=OFFS+ATCS;
ELSE IF TEAM='EAST CAROLINA' THEN OFFS=OFFS+CUSA;
ELSE IF TEAM='EASTERN MICH.' THEN OFFS=OFFS+MIDA;
ELSE IF TEAM='FLORIDA' THEN OFFS=OFFS+SECO;
ELSE IF TEAM='FLORIDA ST.' THEN OFFS=OFFS+ATCS;
ELSE IF TEAM='FRESNO ST.' THEN OFFS=OFFS+WACO;
ELSE IF TEAM='GEORGIA' THEN OFFS=OFFS+SECO;
ELSE IF TEAM='GEORGIA TECH' THEN OFFS=OFFS+ATCS;
ELSE IF TEAM='HAWAII' THEN OFFS=OFFS+WACO;
ELSE IF TEAM='HOUSTON' THEN OFFS=OFFS+CUSA;
ELSE IF TEAM='IDAHO' THEN OFFS=OFFS+SUNB;
ELSE IF TEAM='ILLINOIS' THEN OFFS=OFFS+BTEN;
ELSE IF TEAM='INDIANA' THEN OFFS=OFFS+BTEN;
ELSE IF TEAM='IOWA' THEN OFFS=OFFS+BTEN;
ELSE IF TEAM='IOWA ST.' THEN OFFS=OFFS+BTWV;
ELSE IF TEAM='KANSAS' THEN OFFS=OFFS+BTWV;
ELSE IF TEAM='KANSAS ST.' THEN OFFS=OFFS+BTWV;
ELSE IF TEAM='KENT ST.' THEN OFFS=OFFS+MIDA;
ELSE IF TEAM='KENTUCKY' THEN OFFS=OFFS+SECO;
ELSE IF TEAM='LA-LAFAYETTE' THEN OFFS=OFFS+SUNB;
ELSE IF TEAM='LOUISIANA TECH' THEN OFFS=OFFS+WACO;
ELSE IF TEAM='LOUISIANA-MONROE' THEN OFFS=OFFS+SUNB;
ELSE IF TEAM='LOUISVILLE' THEN OFFS=OFFS+CUSA;
ELSE IF TEAM='LSU' THEN OFFS=OFFS+SECO;
ELSE IF TEAM='MARSHALL' THEN OFFS=OFFS+MIDA;
ELSE IF TEAM='MARYLAND' THEN OFFS=OFFS+ATCS;
ELSE IF TEAM='MEMPHIS' THEN OFFS=OFFS+CUSA;
ELSE IF TEAM='MIAMI, FLORIDA' THEN OFFS=OFFS+BEST;
ELSE IF TEAM='MIAMI, OHIO' THEN OFFS=OFFS+MIDA;
ELSE IF TEAM='MICHIGAN' THEN OFFS=OFFS+BTEN;
ELSE IF TEAM='MICHIGAN ST.' THEN OFFS=OFFS+BTEN;
ELSE IF TEAM='MIDDLE TENN.' THEN OFFS=OFFS+SUNB;
ELSE IF TEAM='MINNESOTA' THEN OFFS=OFFS+BTEN;
ELSE IF TEAM='MISSISSIPPI' THEN OFFS=OFFS+SECO;
ELSE IF TEAM='MISSISSIPPI ST.' THEN OFFS=OFFS+SECO;
ELSE IF TEAM='MISSOURI' THEN OFFS=OFFS+BTWV;
ELSE IF TEAM='NAVY' THEN OFFS=OFFS+INDE;
ELSE IF TEAM='NEBRASKA' THEN OFFS=OFFS+BTWV;
ELSE IF TEAM='NEVADA' THEN OFFS=OFFS+WACO;
ELSE IF TEAM='NEW MEXICO' THEN OFFS=OFFS+MWST;
ELSE IF TEAM='NEW MEXICO ST.' THEN OFFS=OFFS+SUNB;
ELSE IF TEAM='NORTH CAROLINA' THEN OFFS=OFFS+ATCS;
ELSE IF TEAM='NORTH CAROLINA ST.' THEN OFFS=OFFS+ATCS;
ELSE IF TEAM='NORTH TEXAS' THEN OFFS=OFFS+SUNB;
ELSE IF TEAM='NORTHERN ILLINOIS' THEN OFFS=OFFS+MIDA;
ELSE IF TEAM='NORTHWESTERN' THEN OFFS=OFFS+BTEN;
ELSE IF TEAM='NOTRE DAME' THEN OFFS=OFFS+INDE;
ELSE IF TEAM='OHIO ST.' THEN OFFS=OFFS+BTEN;
ELSE IF TEAM='OHIO U.' THEN OFFS=OFFS+MIDA;
ELSE IF TEAM='OKLAHOMA' THEN OFFS=OFFS+BTWV;
ELSE IF TEAM='OKLAHOMA ST.' THEN OFFS=OFFS+BTWV;
ELSE IF TEAM='OREGON' THEN OFFS=OFFS+PTEN;
```

```
ELSE IF TEAM='OREGON ST.' THEN OFFS=OFFS+PTEN;
ELSE IF TEAM='PENN ST.' THEN OFFS=OFFS+BTEN;
ELSE IF TEAM='PITTSBURGH' THEN OFFS=OFFS+BEST;
ELSE IF TEAM='PURDUE' THEN OFFS=OFFS+BTEN;
ELSE IF TEAM='RICE' THEN OFFS=OFFS+WACO;
ELSE IF TEAM='RUTGERS' THEN OFFS=OFFS+BEST;
ELSE IF TEAM='SAN DIEGO ST.' THEN OFFS=OFFS+MWST;
ELSE IF TEAM='SAN JOSE ST.' THEN OFFS=OFFS+WACO;
ELSE IF TEAM='SMU' THEN OFFS=OFFS+WACO;
ELSE IF TEAM='SOUTH CAROLINA' THEN OFFS=OFFS+SECO;
ELSE IF TEAM='SOUTH FLORIDA' THEN OFFS=OFFS+INDE;
ELSE IF TEAM='SOUTHERN MISS.' THEN OFFS=OFFS+CUSA;
ELSE IF TEAM='STANFORD' THEN OFFS=OFFS+PTEN;
ELSE IF TEAM='SYRACUSE' THEN OFFS=OFFS+BEST;
ELSE IF TEAM='TCU' THEN OFFS=OFFS+CUSA;
ELSE IF TEAM='TEMPLE' THEN OFFS=OFFS+BEST;
ELSE IF TEAM='TENNESSEE' THEN OFFS=OFFS+SECO;
ELSE IF TEAM='TEXAS' THEN OFFS=OFFS+BTWV;
ELSE IF TEAM='TEXAS A & M' THEN OFFS=OFFS+BTWV;
ELSE IF TEAM='TEXAS TECH' THEN OFFS=OFFS+BTWV;
ELSE IF TEAM='TOLEDO' THEN OFFS=OFFS+MIDA;
ELSE IF TEAM='TROY ST.' THEN OFFS=OFFS+INDE;
ELSE IF TEAM='TULANE' THEN OFFS=OFFS+CUSA;
ELSE IF TEAM='TULSA' THEN OFFS=OFFS+WACO;
ELSE IF TEAM='UAB' THEN OFFS=OFFS+CUSA;
ELSE IF TEAM='UCLA' THEN OFFS=OFFS+PTEN;
ELSE IF TEAM='UNLV' THEN OFFS=OFFS+MWST;
ELSE IF TEAM='USC' THEN OFFS=OFFS+PTEN;
ELSE IF TEAM='UTAH' THEN OFFS=OFFS+MWST;
ELSE IF TEAM='UTAH ST.' THEN OFFS=OFFS+INDE;
ELSE IF TEAM='UTEP' THEN OFFS=OFFS+WACO;
ELSE IF TEAM='VANDERBILT' THEN OFFS=OFFS+SECO;
ELSE IF TEAM='VIRGINIA' THEN OFFS=OFFS+ATCS;
ELSE IF TEAM='VIRGINIA TECH' THEN OFFS=OFFS+BEST;
ELSE IF TEAM='WAKE FOREST' THEN OFFS=OFFS+ATCS;
ELSE IF TEAM='WASHINGTON' THEN OFFS=OFFS+PTEN;
ELSE IF TEAM='WASHINGTON ST.' THEN OFFS=OFFS+PTEN;
ELSE IF TEAM='WEST VIRGINIA' THEN OFFS=OFFS+BEST;
ELSE IF TEAM='WESTERN MICH.' THEN OFFS=OFFS+MIDA;
ELSE IF TEAM='WISCONSIN' THEN OFFS=OFFS+BTEN;
ELSE IF TEAM='WYOMING' THEN OFFS=OFFS+MWST;

IF WAP=. THEN WAP=0;
IF WESPN=. THEN WESPN=0;
DEFS = DEFS + (WAP2 * WAP) + (WESPN2 * WESPN);

KEEP TEAM OFFS DEFS HOME WIN LOSS WAP WESPN;

DATA RESULT;
 SET RESULT;

 INDEX=OFFS-DEFS;

PROC SORT;
 BY DESCENDING INDEX;

PROC MEANS MEAN;
 VAR HOME WAP WESPN;

PROC PRINT U;
 TITLE &WK;
```

```
 VAR TEAM INDEX WIN LOSS OFFS DEFS;

DATA RESULT;
 SET _NULL_;

%MEND;

%MACRO REGALL;

*************** DETERMINATION OF ALLOCATION ************;

PROC REG DATA=TEMP OUTEST=EST /*NOPRINT*/;
  MODEL SCORE= HOME   WAP WESPN

    /* CONFERENCES */
ATCS   BTEN   CUSA   MIDA   PTEN   SECO   SUNB   WACO
BEST   BTWV       MWST  INDE

    /* NULLS IF NO CONFERENCES */ /*
  AIR1  AKR1  ALA1  ARZ1  ARS1  AMY1  BYL1  BOI1
BSC1  CFL1  CLE1  ILL1  UTS1 */ /*

  AIR*/
       AKR   ALA   ARZ   ARS   AMY   BYL   BOI
BSC   CFL   CLE   ILL  UTS

    /* END NULLS */
VAT   IAS   MMP   BWG   SDS   ARK   LAT
DUK   WVA   KAN   SMI   CMI   UTH   AUB   NEV
FLS   IND   KSS   TCU   EMI   WYO   FLA   RIC
GAT       MSO   TUL   KNT       GEO   SJS
MYL   IOW   NEB   UAB   MIO   AZS   KTK   SMU
NCS   MIC   OKS       MSH   CAL   LSU   TLS
UNC   MIS   OKU   CON   NIL   ORS   MSP   UTP
VIR   MNN   TAM   NDM   OHU   STF   MST
WAK   NWN   TEX   NVY   TOL   ULA   SCU   IDA
    OHS   TXT   SFL   WMI   UOR   TEN   LAL
MIA   PNS       TRY       USC   VAN   LMR
PIT   PUR   CIN       BYU   WAS       MTE
RUT   WIS   ECA       CST   WSH   FRS   NMS
SYR       HOU   BFF   NLV       HAW   NTX
TPL   COL   LSV   BLL   NMX

VAT1  IAS1  MMP1  BWG1  SDS1  ARK1  LAT1
DUK1  WVA1  KAN1  SMI1  CMI1  UTH1  AUB1  NEV1
FLS1  IND1  KSS1  TCU1  EMI1  WYO1  FLA1  RIC1
GAT1      MSO1  TUL1  KNT1      GEO1  SJS1
MYL1  IOW1  NEB1  UAB1  MIO1  AZS1  KTK1  SMU1
NCS1  MIC1  OKS1      MSH1  CAL1  LSU1  TLS1
UNC1  MIS1  OKU1  CON1  NIL1  ORS1  MSP1  UTP1
VIR1  MNN1  TAM1  NDM1  OHU1  STF1  MST1
WAK1  NWN1  TEX1  NVY1  TOL1  ULA1  SCU1  IDA1
    OHS1  TXT1  SFL1  WMI1  UOR1  TEN1  LAL1
MIA1  PNS1      TRY1      USC1  VAN1  LMR1
PIT1  PUR1  CIN1      BYU1  WAS1      MTE1
RUT1  WIS1  ECA1      CST1  WSH1  FRS1  NMS1
SYR1      HOU1  BFF1  NLV1      HAW1  NTX1
TPL1  COL1  LSV1  BLL1  NMX1

    / NOINT;
```

```
  %PROG;

%MEND;

%REGALL;

*** FILEIN VARIABLE CHANGES TO 'ROTH' OR 'NONE' TO CHANGE MOV ***;

%MEND;
      %WEEKLY('27AUG2001'D);
      %WEEKLY('03SEP2001'D);
      %WEEKLY('10SEP2001'D);
      %WEEKLY('24SEP2001'D);
      %WEEKLY('01OCT2001'D);
      %WEEKLY('08OCT2001'D);
      %WEEKLY('15OCT2001'D);
      %WEEKLY('22OCT2001'D);
      %WEEKLY('29OCT2001'D);
      %WEEKLY('05NOV2001'D);
      %WEEKLY('12NOV2001'D);
      %WEEKLY('19NOV2001'D);
      %WEEKLY('26NOV2001'D);
      %WEEKLY('03DEC2001'D);
      %WEEKLY('10DEC2001'D);
      %WEEKLY('04JAN2002'D);
```

Appendix C – ANOVA Statistics

Model: Actual Scores/Combined

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	235	1061874	4518.613	36.31	<.0001
Error	1069	133015	124.4293		
Uncorrected Total	1304	1194889			

Root MSE	11.15479	R-Square	0.8887
Dependent Mean	26.6066	Adj R-Sq	0.8642
Coeff Var	41.9249		

Model: Actual Scores/Conferences

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	233	1061825	4557.18989	36.68	<.0001
Error	1071	133064	124.24254		
Uncorrected Total	1304	1194889			

Root MSE	11.14641	R-Square	0.8886
Dependent Mean	26.6066	Adj R-Sq	0.8644
Coeff Var	41.89342		

Model: Actual Scores/Polls

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	236	1061881	4499.496	36.13	<.0001
Error	1068	133008	124.5393		
Uncorrected Total	1304	1194889			

Root MSE	11.15972	R-Square	0.8887
Dependent Mean	26.6066	Adj R-Sq	0.8641
Coeff Var	41.94342		

Model: Actual Scores/Base

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	234	1061832	4537.74476	36.49	<.0001
Error	1070	133057	124.35208		
Uncorrected Total	1304	1194889			

Root MSE	11.15133	R-Square	0.8886
Dependent Mean	26.6066	Adj R-Sq	0.8643
Coeff Var	41.91189		

Model: Logistic/Combined

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	235	453.4079	1.9294	21.62	<.0001
Error	1069	95.39566	0.08924		
Uncorrected Total	1304	548.80356			

Root MSE	0.29873	R-Square	0.8262
Dependent Mean	0.5	Adj R-Sq	0.788
Coeff Var	59.74553		

Model: Logistic/Conferences

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	233	453.408	1.94596	21.85	<.0001
Error	1071	95.3957	0.08907		
Uncorrected Total	1304	548.804			

Root MSE	0.29845	R-Square	0.8262
Dependent Mean	0.5	Adj R-Sq	0.7884
Coeff Var	59.68974		

Model: Logistic/Polls

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	236	453.54576	1.9218	21.55	<.0001
Error	1068	95.2578	0.08919		
Uncorrected Total	1304	548.80356			

Root MSE	0.29865	R-Square	0.8264
Dependent Mean	0.5	Adj R-Sq	0.7881
Coeff Var	59.73029		

Model: Logistic/Base

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	234	453.546	1.93823	21.77	<.0001
Error	1070	95.2578	0.08903		
Uncorrected Total	1304	548.804			

Root MSE	0.29837	R-Square	0.8264
Dependent Mean	0.5	Adj R-Sq	0.7885
Coeff Var	59.67444		

Model: Win-Loss/Combined

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	235	490.33772	2.08654	13.8	<.0001
Error	1069	161.66228	0.15123		
Uncorrected Total	1304	652			

Root MSE	0.38888	R-Square	0.7521
Dependent Mean	0.5	Adj R-Sq	0.6975
Coeff Var	77.77598		

Model: Win-Loss/Conferences

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	233	490.338	2.10445	13.94	<.0001
Error	1071	161.662	0.15095		
Uncorrected Total	1304	652			

Root MSE	0.38852	R-Square	0.7521
Dependent Mean	0.5	Adj R-Sq	0.6981
Coeff Var	77.70333		

Model: Win-Loss/Polls

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	236	490.43079	2.0781	13.74	<.0001
Error	1068	161.56921	0.15128		
Uncorrected Total	1304	652			

Root MSE	0.38895	R-Square	0.7522
Dependent Mean	0.5	Adj R-Sq	0.6974
Coeff Var	77.78998		

Model: Win-Loss/Base

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	234	490.431	2.09586	13.88	<.0001
Error	1070	161.569	0.151		
Uncorrected Total	1304	652			

Root MSE	0.38859	R-Square	0.7522
Dependent Mean	0.5	Adj R-Sq	0.698
Coeff Var	77.71725		

Appendix D – Sample Results (Combined/Actual)

The REG Procedure
Model: MODEL1
Dependent Variable: SCORE

NOTE: No intercept in model. R-Square is redefined.

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	235	1061874	4518.61316	36.31	<.0001
Error	1069	133015	124.42929		
Uncorrected Total	1304	1194889			

Root MSE	11.15479	R-Square	0.8887
Dependent Mean	26.60660	Adj R-Sq	0.8642
Coeff Var	41.92490		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > ³t³
HOME	1	3.18585	0.65256	4.88	<.0001
WAP	1	-0.00386	0.00621	-0.62	0.5344
WESPN	1	0.00469	0.00751	0.63	0.5319
ATCS	1	41.63720	5.14163	8.10	<.0001
BTEN	1	44.38716	5.01767	8.85	<.0001
CUSA	1	25.76216	4.82668	5.34	<.0001
MIDA	1	34.45019	4.45572	7.73	<.0001
PTEN	1	37.56531	5.07009	7.41	<.0001
SECO	1	38.42854	5.00316	7.68	<.0001
SUNB	1	15.87435	5.35558	2.96	0.0031
WACO	1	36.17979	4.94332	7.32	<.0001
BEST	1	40.34557	5.00439	8.06	<.0001
BTWV	1	27.81613	5.20372	5.35	<.0001
MWST	1	34.70827	4.95093	7.01	<.0001
INDE	1	36.06358	5.25441	6.86	<.0001
AKR	1	-1.87040	5.13993	-0.36	0.7160
ALA	1	-18.19633	4.97893	-3.65	0.0003
ARZ	1	-3.60927	5.02634	-0.72	0.4729
ARS	1	-0.14307	5.35610	-0.03	0.9787
AMY	1	-1.88287	5.03994	-0.37	0.7088
BYL	1	-3.39011	5.14696	-0.66	0.5103
BOI	1	-11.64049	4.92461	-2.36	0.0183
BSC	1	-18.83370	4.94453	-3.81	0.0001
CFL	1	-16.20133	5.17871	-3.13	0.0018
CLE	1	-10.43961	5.11156	-2.04	0.0414

ILL	1	-14.97712	-3.00	0.0028
UTS	1	-0.90698	-0.17	0.8615
VAT	1	-23.07226	-4.56	<.0001
IAS	1	-15.71224	-3.10	0.0020
MMP	1	-8.64556	-1.67	0.0950
BWG	1	-15.77390	-3.08	0.0021
SDS	1	-9.86550	-1.98	0.0481

The REG Procedure
Model: MODEL1
Dependent Variable: SCORE

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > ³t³
ARK	1	-15.82093	5.03092	-3.14	0.0017
LAT	1	-1.92011	4.95276	-0.39	0.6983
DUK	1	4.54775	5.12285	0.89	0.3749
WVA	1	-13.88947	5.10946	-2.72	0.0067
KAN	1	-2.96921	5.13240	-0.58	0.5630
SMI	1	-19.71930	5.06416	-3.89	0.0001
CMI	1	-3.32796	5.25975	-0.63	0.5271
UTH	1	-19.30624	4.77630	-4.04	<.0001
AUB	1	-17.21614	4.98958	-3.45	0.0006
NEV	1	2.32457	4.94896	0.47	0.6387
FLS	1	-17.06819	5.03809	-3.39	0.0007
IND	1	-13.46106	5.06392	-2.66	0.0080
KSS	1	-22.22321	4.93333	-4.50	<.0001
TCU	1	-12.41187	5.03083	-2.47	0.0138
EMI	1	1.98721	5.40224	0.37	0.7131
WYO	1	0.10768	4.98673	0.02	0.9828
FLA	1	-24.54931	5.20192	-4.72	<.0001
RIC	1	-6.68369	4.89806	-1.36	0.1727
GAT	1	-17.19421	4.99323	-3.44	0.0006
MSO	1	-8.08966	5.19156	-1.56	0.1195
TUL	1	7.14975	4.98884	1.43	0.1521
KNT	1	-9.84008	5.25205	-1.87	0.0613
GEO	1	-19.68512	5.04403	-3.90	0.0001
SJS	1	0.28016	4.91902	0.06	0.9546
MYL	1	-17.33081	5.03800	-3.44	0.0006
IOW	1	-17.92766	4.98952	-3.59	0.0003
NEB	1	-21.11247	5.06779	-4.17	<.0001
UAB	1	-17.71284	5.16885	-3.43	0.0006
MIO	1	-10.78867	4.98594	-2.16	0.0307
AZS	1	-4.47298	5.05192	-0.89	0.3761
KTK	1	-7.37566	5.10656	-1.44	0.1489
SMU	1	-8.24724	5.02734	-1.64	0.1012
NCS	1	-17.12118	5.01186	-3.42	0.0007
MIC	1	-20.77968	5.03280	-4.13	<.0001
OKS	1	-11.56243	5.17099	-2.24	0.0256
MSH	1	-7.70445	5.12865	-1.50	0.1333
CAL	1	-1.82263	5.05690	-0.36	0.7186
LSU	1	-18.49651	4.92933	-3.75	0.0002

TLS	1	2.92333	5.13391	0.57	0.5692
UNC	1	-19.71340	4.88802	-4.03	<.0001
MIS	1	-13.05906	4.98445	-2.62	0.0089
OKU	1	-23.81312	5.05788	-4.71	<.0001
CON	1	0.41675	5.21661	0.08	0.9363
NIL	1	-8.47073	5.26279	-1.61	0.1078
ORS	1	-16.13595	5.20977	-3.10	0.0020
MSP	1	-6.54664	5.23707	-1.25	0.2116
UTP	1	6.53179	5.12426	1.27	0.2027
VIR	1	-12.83774	5.12726	-2.50	0.0124
MNN	1	-11.52193	5.22015	-2.21	0.0275

The REG Procedure
Model: MODEL1
Dependent Variable: SCORE

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > ³t³
TAM	1	-21.94904	5.01314	-4.38	<.0001
NDM	1	-20.20969	5.02515	-4.02	<.0001
OHU	1	-6.94834	5.11544	-1.36	0.1747
STF	1	-11.20713	4.98174	-2.25	0.0247
MST	1	-15.90711	5.08104	-3.13	0.0018
WAK	1	-10.90653	5.25448	-2.08	0.0382
NWN	1	-4.67917	5.08280	-0.92	0.3575
TEX	1	-21.64019	5.06141	-4.28	<.0001
NVY	1	-0.39994	5.15201	-0.08	0.9381
TOL	1	-8.20756	5.01032	-1.64	0.1017
ULA	1	-19.50992	5.11469	-3.81	0.0001
SCU	1	-20.77828	5.12003	-4.06	<.0001
IDA	1	13.45310	5.19481	2.59	0.0097
OHS	1	-18.35269	4.94965	-3.71	0.0002
TXT	1	-12.75512	5.02017	-2.54	0.0112
SFL	1	-13.64873	5.46538	-2.50	0.0127
WMI	1	-10.31584	5.25425	-1.96	0.0499
UOR	1	-18.70504	5.10261	-3.67	0.0003
TEN	1	-21.61685	5.01790	-4.31	<.0001
LAL	1	3.73570	5.19146	0.72	0.4719
MIA	1	-29.57312	5.27103	-5.61	<.0001
PNS	1	-17.03333	5.09062	-3.35	0.0008
TRY	1	-9.06306	5.72738	-1.58	0.1139
USC	1	-22.33660	4.93926	-4.52	<.0001
VAN	1	-3.74376	5.24019	-0.71	0.4751
LMR	1	-1.60990	5.20717	-0.31	0.7573
PIT	1	-15.94923	5.10282	-3.13	0.0018
PUR	1	-17.27995	4.98032	-3.47	0.0005
CIN	1	-9.59454	4.95219	-1.94	0.0530
BYU	1	-4.78059	4.66064	-1.03	0.3052
WAS	1	-17.94049	5.08874	-3.53	0.0004
MTE	1	-5.41563	5.10094	-1.06	0.2886
RUT	1	0.09699	5.07928	0.02	0.9848
WIS	1	-10.71556	5.10237	-2.10	0.0360

ECA	1	-7.32883	5.04758	-1.45	0.1468
CST	1	-13.85657	4.76196	-2.91	0.0037
WSH	1	-11.15784	5.02573	-2.22	0.0266
FRS	1	-11.27321	4.75929	-2.37	0.0180
NMS	1	0.31063	4.94003	0.06	0.9499
SYR	1	-21.34156	4.89427	-4.36	<.0001
HOU	1	3.40174	5.03640	0.68	0.4995
BFF	1	-5.91409	5.10876	-1.16	0.2473
NLV	1	-11.99372	4.87470	-2.46	0.0140
HAW	1	-5.65594	5.01906	-1.13	0.2600
NTX	1	-9.12067	4.92723	-1.85	0.0644
TPL	1	-9.59062	5.08729	-1.89	0.0597
COL	1	-15.87461	4.85538	-3.27	0.0011
LSV	1	-20.53398	4.89917	-4.19	<.0001
BLL	1	-8.20764	5.25990	-1.56	0.1190

The REG Procedure
Model: MODEL1
Dependent Variable: SCORE

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > ³t³
NMX	1	-12.18464	4.87039	-2.50	0.0125
VAT1	1	3.00625	4.72980	0.64	0.5252
IAS1	1	8.34484	5.02996	1.66	0.0974
MMP1	1	10.17833	5.03790	2.02	0.0436
BWG1	1	2.00342	4.28704	0.47	0.6404
SDS1	1	-13.14843	4.98489	-2.64	0.0085
ARK1	1	0.11558	4.76761	0.02	0.9807
LAT1	1	3.97444	4.68277	0.85	0.3962
DUK1	1	-11.55506	4.84381	-2.39	0.0172
WVA1	1	-5.04333	4.75199	-1.06	0.2888
KAN1	1	2.12947	5.09257	0.42	0.6759
SMI1	1	7.05913	4.87269	1.45	0.1477
CMI1	1	-6.97356	4.45019	-1.57	0.1174
UTH1	1	1.23192	4.77626	0.26	0.7965
AUB1	1	-4.33066	4.68920	-0.92	0.3559
NEV1	1	-5.33475	4.77374	-1.12	0.2640
FLS1	1	6.23521	4.75834	1.31	0.1904
IND1	1	-4.06650	4.81502	-0.84	0.3986
KSS1	1	11.68877	4.88849	2.39	0.0170
TCU1	1	8.06770	4.91603	1.64	0.1011
EMI1	1	-9.94470	4.64937	-2.14	0.0327
WYO1	1	-5.68850	4.98661	-1.14	0.2542
FLA1	1	18.50113	4.90351	3.77	0.0002
RIC1	1	-6.39423	4.67302	-1.37	0.1715
GAT1	1	0.76424	4.75028	0.16	0.8722
MSO1	1	4.92023	5.14584	0.96	0.3392
TUL1	1	12.38262	4.88720	2.53	0.0114
KNT1	1	-4.99428	4.44040	-1.12	0.2610
GEO1	1	-0.09329	4.70724	-0.02	0.9842
SJS1	1	-5.92317	4.67000	-1.27	0.2050

MYL1	1	3.07645	4.75874	0.65	0.5181
IOW1	1	-0.33311	4.66453	-0.07	0.9431
NEB1	1	19.75098	5.04030	3.92	<.0001
UAB1	1	4.43137	5.00841	0.88	0.3765
MIO1	1	0.79850	4.16656	0.19	0.8481
AZS1	1	5.89963	4.84329	1.22	0.2235
KTK1	1	-0.76653	4.77654	-0.16	0.8725
SMU1	1	-11.69336	4.73292	-2.47	0.0136
NCS1	1	-4.78436	4.74945	-1.01	0.3140
MIC1	1	-4.88372	4.69357	-1.04	0.2983
OKS1	1	6.90649	5.10370	1.35	0.1763
MSH1	1	12.30725	4.30096	2.86	0.0043
CAL1	1	-8.23024	4.86830	-1.69	0.0912
LSU1	1	4.42599	4.61723	0.96	0.3380
TLS1	1	-17.45314	4.89479	-3.57	0.0004
UNC1	1	-3.85370	4.66635	-0.83	0.4091
MIS1	1	-1.75272	4.67623	-0.37	0.7079
OKU1	1	13.01615	5.00470	2.60	0.0094
CON1	1	-12.38387	5.39971	-2.29	0.0220

The REG Procedure
Model: MODEL1
Dependent Variable: SCORE

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > ³t³
NIL1	1	-1.31803	4.46937	-0.29	0.7681
ORS1	1	-3.87376	5.00247	-0.77	0.4389
MSP1	1	6.40148	4.91680	1.30	0.1932
UTP1	1	-13.25040	4.88802	-2.71	0.0068
VIR1	1	-8.17941	4.85422	-1.69	0.0923
MNN1	1	-9.62087	4.92382	-1.95	0.0510
TAM1	1	4.02164	5.00635	0.80	0.4220
NDM1	1	-2.22219	5.29430	-0.42	0.6748
OHU1	1	-7.89263	4.29767	-1.84	0.0666
STF1	1	8.86892	4.78321	1.85	0.0640
MST1	1	-8.88287	4.79883	-1.85	0.0644
WAK1	1	-3.88188	4.96801	-0.78	0.4348
NWN1	1	-3.27265	4.80943	-0.68	0.4964
TEX1	1	21.31554	5.00861	4.26	<.0001
NVY1	1	-12.07986	5.41140	-2.23	0.0258
TOL1	1	5.38152	4.19660	1.28	0.2000
ULA1	1	2.88233	4.86587	0.59	0.5537
SCU1	1	-0.44533	4.83365	-0.09	0.9266
IDA1	1	16.79062	5.26345	3.19	0.0015
OHS1	1	-6.53451	4.65650	-1.40	0.1608
TXT1	1	16.67433	4.98520	3.34	0.0009
SFL1	1	-1.70889	5.65251	-0.30	0.7625
WMI1	1	-2.99251	4.45631	-0.67	0.5020
UOR1	1	6.95413	4.93420	1.41	0.1590
TEN1	1	7.09112	4.73362	1.50	0.1344
LAL1	1	9.69544	5.26055	1.84	0.0656

MIA1	1	15.25114	4.96093	3.07	0.0022
PNS1	1	-7.61955	4.79859	-1.59	0.1126
TRY1	1	-2.98613	5.93422	-0.50	0.6149
USC1	1	-2.03924	4.76894	-0.43	0.6690
VAN1	1	-6.45699	4.93628	-1.31	0.1911
LMR1	1	2.39911	5.26113	0.46	0.6485
PIT1	1	-0.90232	4.75739	-0.19	0.8496
PUR1	1	-11.86690	4.68605	-2.53	0.0115
CIN1	1	7.33251	4.79184	1.53	0.1263
BYU1	1	15.01295	4.66034	3.22	0.0013
WAS1	1	4.01600	4.84784	0.83	0.4076
MTE1	1	22.57814	5.12500	4.41	<.0001
RUT1	1	-18.83286	4.74926	-3.97	<.0001
WIS1	1	-4.21574	4.82320	-0.87	0.3823
ECA1	1	18.96627	4.91052	3.86	0.0001
CST1	1	-2.16783	4.76195	-0.46	0.6490
WSH1	1	2.70569	4.81457	0.56	0.5742
FRS1	1	9.57073	4.55247	2.10	0.0358
NMS1	1	14.05029	5.08277	2.76	0.0058
SYR1	1	0.01903	4.58827	0.00	0.9967
HOU1	1	3.64936	4.91773	0.74	0.4582
BFF1	1	-12.21141	4.28891	-2.85	0.0045
NLV1	1	-2.83528	4.87468	-0.58	0.5609

The REG Procedure
Model: MODEL1
Dependent Variable: SCORE

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > ³t³
HAW1	1	6.44271	4.77087	1.35	0.1772
NTX1	1	11.96117	5.06381	2.36	0.0184
TPL1	1	-10.82648	4.75240	-2.28	0.0229
COL1	1	17.18963	4.81428	3.57	0.0004
LSV1	1	10.12339	4.77372	2.12	0.0342
BLL1	1	-5.55201	4.46468	-1.24	0.2139
NMX1	1	-2.58971	4.87039	-0.53	0.5950

The MEANS Procedure

Variable	Mean
HOME	3.1858537
WAP	-0.0038614
WESPN	0.0046947

Obs	TEAM	INDEX	WIN	LOSS	OFFS	DEFS
1	MIAMI, FLORIDA	85.0830	12	0	55.5967	-29.4863

2	FLORIDA	81.4161	10	2	56.9297	-24.4864
3	TEXAS	70.6350	11	2	49.1317	-21.5033
4	NEBRASKA	68.4000	11	2	47.5671	-20.8329
5	TENNESSEE	67.0739	11	2	45.5197	-21.5542
6	VIRGINIA TECH	66.3985	8	4	43.3518	-23.0466
7	OKLAHOMA	64.9364	11	2	40.8323	-24.1041
8	FLORIDA ST.	64.9065	8	4	47.8724	-17.0341
9	OREGON	63.1623	11	1	44.5194	-18.6428
10	IOWA	61.9817	7	5	44.0540	-17.9277
11	MARYLAND	61.8746	10	2	44.7136	-17.1610
12	KANSAS ST.	61.7281	6	6	39.5049	-22.2232
13	LSU	61.4311	10	3	42.8545	-18.5766
14	SYRACUSE	61.3451	10	3	40.3646	-20.9805
15	COLORADO	61.2026	10	3	45.0058	-16.1969
16	UCLA	59.9526	7	4	40.4476	-19.5049
17	MICHIGAN	59.7574	8	4	39.5034	-20.2540
18	GEORGIA TECH	59.6687	7	5	42.4014	-17.2673
19	WASHINGTON ST.	59.4209	9	2	41.5813	-17.8396
20	ILLINOIS	59.2056	10	2	44.3872	-14.8185
21	BOSTON COLLEGE	59.1416	8	4	40.3456	-18.7961
22	SOUTH CAROLINA	58.6027	8	3	37.9832	-20.6195
23	GEORGIA	58.4432	8	4	38.3352	-20.1079
24	USC	57.8469	6	6	35.5261	-22.3208
25	STANFORD	57.6960	9	3	46.4342	-11.2617
26	NORTH CAROLINA	57.4428	8	5	37.7835	-19.6593
27	FRESNO ST.	57.3695	11	3	45.7505	-11.6190
28	TEXAS TECH	57.2602	6	5	44.4905	-12.7697
29	ALABAMA	56.6061	7	5	38.4285	-18.1776
30	OHIO ST.	56.4059	7	5	37.8526	-18.5533
31	LOUISVILLE	56.2771	10	2	35.8856	-20.3916
32	MICHIGAN ST.	55.6935	7	5	42.6344	-13.0591
33	PITTSBURGH	55.3925	6	5	39.4432	-15.9492
34	UTAH	55.2324	8	4	35.9402	-19.2922
35	ARKANSAS	54.3169	6	5	38.5441	-15.7728
36	MARSHALL	54.2877	9	2	46.7574	-7.5303
37	BRIGHAM YOUNG	54.1733	12	2	49.7212	-4.4521
38	NOTRE DAME	54.0511	5	6	33.8414	-20.2097
39	NORTH CAROLINA ST.	53.9769	7	5	36.8528	-17.1240
40	PENN ST.	53.7869	5	6	36.7676	-17.0193
41	INDIANA	53.7817	5	6	40.3207	-13.4611
42	TEXAS A & M	53.7318	7	4	31.8378	-21.8941
43	SOUTHERN MISS.	52.5406	6	5	32.8213	-19.7193
44	BOWLING GREEN	52.2314	8	3	36.4536	-15.7778
45	CLEMSON	52.0580	6	5	41.6372	-10.4208
46	EAST CAROLINA	52.0573	5	6	44.7284	-7.3288
47	IOWA ST.	51.8260	6	5	36.1610	-15.6650
48	WASHINGTON	51.4731	8	4	40.2710	-11.2021
49	MISSISSIPPI	51.3750	6	4	44.8300	-6.5450
50	AUBURN	51.3017	7	5	34.0979	-17.2039
51	WISCONSIN	50.8870	4	7	40.1714	-10.7156
52	CENTRAL FLORIDA	50.6515	5	5	34.4502	-16.2013
53	OREGON ST.	49.8275	4	6	33.6915	-16.1360
54	PURDUE	49.8002	6	6	32.5203	-17.2800
55	WEST VIRGINIA	49.1917	3	8	35.3022	-13.8895
56	WAKE FOREST	48.6572	5	5	37.7553	-10.9018

Obs	TEAM	INDEX	WIN	LOSS	OFFS	DEFS
57	TOLEDO	48.1608	10	2	39.8317	-8.3291
58	HAWAII	48.1415	8	3	42.6225	-5.5190
59	SOUTH FLORIDA	48.0034	5	3	34.3547	-13.6487
60	ARIZONA ST.	47.9379	4	7	43.4649	-4.4730
61	UAB	47.9064	5	5	30.1935	-17.7128
62	BOISE ST.	47.8319	8	4	36.1798	-11.6521
63	COLORADO ST.	46.3970	7	5	32.5404	-13.8566
64	VIRGINIA	46.2955	4	7	33.4578	-12.8377
65	MINNESOTA	46.2882	3	7	34.7663	-11.5219
66	OKLAHOMA ST.	46.2850	3	7	34.7226	-11.5624
67	TCU	46.2417	6	5	33.8299	-12.4119
68	MIAMI, OHIO	46.0374	7	5	35.2487	-10.7887
69	NORTHWESTERN	45.7937	4	7	41.1145	-4.6792
70	MISSISSIPPI ST.	45.4528	3	8	29.5457	-15.9071
71	KENTUCKY	45.0377	2	9	37.6620	-7.3757
72	MEMPHIS	44.5860	4	6	35.9405	-8.6456
73	NEW MEXICO	44.3032	6	5	32.1186	-12.1846
74	MIDDLE TENN.	43.8681	8	3	38.4525	-5.4156
75	UNLV	43.8667	4	7	31.8730	-11.9937
76	CINCINNATI	42.6892	7	5	33.0947	-9.5945
77	TROY ST.	42.1405	3	4	33.0774	-9.0631
78	LOUISIANA TECH	42.0821	7	5	40.1542	-1.9278
79	WESTERN MICH.	41.7735	4	6	31.4577	-10.3158
80	NORTHERN ILLINOIS	41.6029	5	5	33.1322	-8.4707
81	ARIZONA	41.1746	5	6	37.5653	-3.6093
82	MISSOURI	40.8260	3	7	32.7364	-8.0897
83	KENT ST.	39.2960	5	5	29.4559	-9.8401
84	TEMPLE	39.1097	4	7	29.5191	-9.5906
85	BALL ST.	37.1058	5	5	28.8982	-8.2076
86	UTAH ST.	36.9706	2	7	36.0636	-0.9070
87	NORTH TEXAS	36.9562	5	7	27.8355	-9.1207
88	RICE	36.4693	8	4	29.7856	-6.6837
89	AKRON	36.3206	4	7	34.4502	-1.8704
90	VANDERBILT	35.7153	1	9	31.9715	-3.7438
91	AIR FORCE	34.7083	5	6	34.7083	0.0000
92	OHIO U.	33.5059	1	10	26.5576	-6.9483
93	KANSAS	32.9148	2	8	29.9456	-2.9692
94	SMU	32.7337	4	7	24.4864	-8.2472
95	SAN DIEGO ST.	31.4253	2	8	21.5598	-9.8655
96	BAYLOR	31.2062	2	8	27.8161	-3.3901
97	CALIFORNIA	31.1577	1	10	29.3351	-1.8226
98	TULANE	30.9950	2	9	38.1448	7.1497
99	CENTRAL MICHIGAN	30.8046	2	8	27.4766	-3.3280
100	SAN JOSE ST.	29.9765	3	9	30.2566	0.2802
101	NEW MEXICO ST.	29.6140	5	7	29.9246	0.3106
102	WYOMING	28.9121	1	9	29.0198	0.1077
103	NEVADA	28.5205	3	8	30.8450	2.3246
104	BUFFALO	28.1529	3	8	22.2388	-5.9141
105	ARMY	27.6450	3	8	25.7622	-1.8829
106	HOUSTON	26.0098	0	11	29.4115	3.4017
107	DUKE	25.5344	0	11	30.0821	4.5478
108	NAVY	24.3837	0	10	23.9837	-0.3999
109	CONNECTICUT	23.2629	2	8	23.6797	0.4168

110	EASTERN MICH.	22.5183	1	8	24.5055	1.9872
111	LA-LAFAYETTE	21.8341	2	8	25.5698	3.7357
112	RUTGERS	21.4157	2	9	21.5127	0.0970

Obs	TEAM	INDEX	WIN	LOSS	OFFS	DEFS
113	LOUISIANA-MONROE	19.8834	2	8	18.2735	-1.6099
114	IDAHO	19.2119	1	9	32.6650	13.4531
115	UTEP	16.3976	1	9	22.9294	6.5318
116	ARKANSAS ST.	16.0174	2	7	15.8743	-0.1431
117	TULSA	15.8033	0	10	18.7267	2.9233

Appendix E – Comparison of Rating Systems

	Normalized Weekly Percentage (Predictive)	Final Ranking Accuracy (Retrodictive)	R^2	Intent[1]
Pure Scores				
Base	72.3	81.1	0.889	
Conf	72.3	81.1	0.889	
Polls	72.1	80.8	0.889	
Combined	72.3	80.8	0.889	
Win/Loss				
Base	67.3	83.1	0.752	
Conf	67.3	83.0	0.752	
Polls	67.3	83.1	0.752	
Combined	67.3	83.0	0.752	
Logistic				
Base	70.6	82.8	0.826	
Conf	70.3	83.0	0.826	
Polls	70.6	82.8	0.826	
Combined	70.3	83.0	0.826	
Seattle Times	67.9	80.8		Predictive
Billingsley	68.2	82.6		Predictive
Colley	66.2	83.3		Retrodictive
Massey	70.6	83.7		Retrodictive
Scripps-Howard	70.9	83.3		Predictive
Rothman	88.6	80.3		Retrodictive
Sagarin		82.1		Mixed
Wolfe		81.4		Retrodictive

Note: [1] Intents specified by Wilson (2002)

Appendix F – Graph of Residuals for the Combined/Actual Model