FOOTBALL
GAME ANALYSIS

By
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DEDICATION

To my wife, June, and daughter, Elizabeth: Football is a passion you've let me indulge in, yet you always remind me of my life's priorities – faith first, family second, football third.

ACKNOWLEDGEMENTS

Thank you to all of the coaches I have had the pleasure of working with through the years. I value the relationships in this profession and cannot list all of you who have left a mark in my life.

I would especially like to thank Ron Zook. I am still trying to 'learn to sleep twice as fast so I only have to sleep half as long.' You were my biggest help early in my career and I could never thank you enough for all of the opportunities and memories you have given me in this journey.

Special thanks to XOS Digital for their support in publishing this book. This was a great place to work and I am grateful for knowing all of the great people.

Finally, I cannot say thank you enough to the Jacksonville Jaguars, especially Mike Perkins and Tony Khan. After all of the teams I have visited and worked, I could not imagine a place better place to be in either college or professional football. It is a very special place to work and I am very fortunate to be a part of this team.

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INTRODUCTION

Having computer software and video without a good plan on how to study the relationships of measurable facts to predict future decisions and trends is just as useful as having a car without keys—it may look great, but it will not get you anywhere.

The key to successful scouting is systematically **defining what you see on the field, and then knowing how and what to look at after it has been defined**. Two of the most critical elements to successful scouting are: First, deciding how you will label what you see; and second, deciding how it is then entered into the computer. This book will help define a system of data fields and terminology to get the best results with whatever computer scouting system you are using.

My experience in the area of game analysis first evolved over 16 years at the University of Florida and two years with the Jacksonville Jaguars. During my years at Florida, I had the privilege of working with defensive coordinators James Bates, Jon Hoke, Bobby Pruitt, Bob Stoops and Ron Zook. Florida also had many other outstanding assistant coaches to whom I owe a lot. It is their expertise and knowledge that has formed the foundation of this system.

For five years I served as the lead field representative for the XOS Sagio Game Analysis program. In this position, I installed and customized the program for over 50 NFL and NCAA Division I-A football teams. It was a great opportunity for discussing game analysis and gameplan preparation with some of the best in the business. It is through these experiences that I have further refined this system.

It is my hope that this book will help you (and your staff) get organized. I should note that every defensive coordinator I worked with at Florida and Jacksonville was different in their preparation. Likewise, every installation of the XOS Sagio Game Analysis program has also been unique. This book is not a turn-key solution, but rather a reference manual and idea book to get you started. I welcome any feedback and suggestions. Please feel free to contact me at stoeberm@nfl.jaguars.com

Thanks and best of luck!

Michael Stoeber

SECTION 1 - BASIC INFORMATION

Chapter 1 - The Game Analysis System

Before exploring the details and implementation of this game analysis system, it is best to first understand the what and why of using such a system.

What is a Game Analysis System?

A game analysis system is different from normal scouting because of its approach, methodologies and results. This system is a technique which—when applied to your other game preparation efforts—will result in better prepared players and the increased ability to predict offensive play-calling tendencies. The system can be defined as the detailed study of strengths and weaknesses by:

1) Having a terminology system capable of identifying virtually every possible offensive alignment and play,

2) Using the system to identify individual play elements,

3) Grouping similar data values together to summarize the information, and

4) Analyzing the gathered data in various formats that are both informative and easy to read.

You have the option of using the terminology as defined in this book or substituting your own terminology, as long as it fits within a framework. It is the framework that is important. Without it, you will lose much valuable information.

Why perform game analysis?

After many hours of watching video and even more hours typing data into the computer, a normal response is 'Why am I doing this?' The answer is simple: As a coach, it is your job to get inside the head of your competitor to better select your own plays. The game of football is a fine balance of the advantages and disadvantages for both the offense and defensive teams.

Offensive Team	Defensive Team
Advantages	
- Knows snap count - Knows where the play is going	- More use of hands and arms, which improves balance and allows players to avoid blockers
Disadvantages	
- Limitations to use of hands - 75% of penalties are against the offense - Successful play requires the coordinated execution of all 11.	- Unknown snap count and play direction - 18 areas to stop with only 11 defenders

Chart 1-1 - Offense vs. Defense

Through proper scouting, a defensive coach can help to minimize his team's disadvantages and get his players in the best positions. In order to truly stop any offensive play without guessing or having players worry about dual responsibilities, a defense would need to have 18 players. This breaks down to 10 players to stop the run (one for each gap + one to account for the fullback gap) and eight players to stop the pass. (Five short pass zones and three deep pass zones)
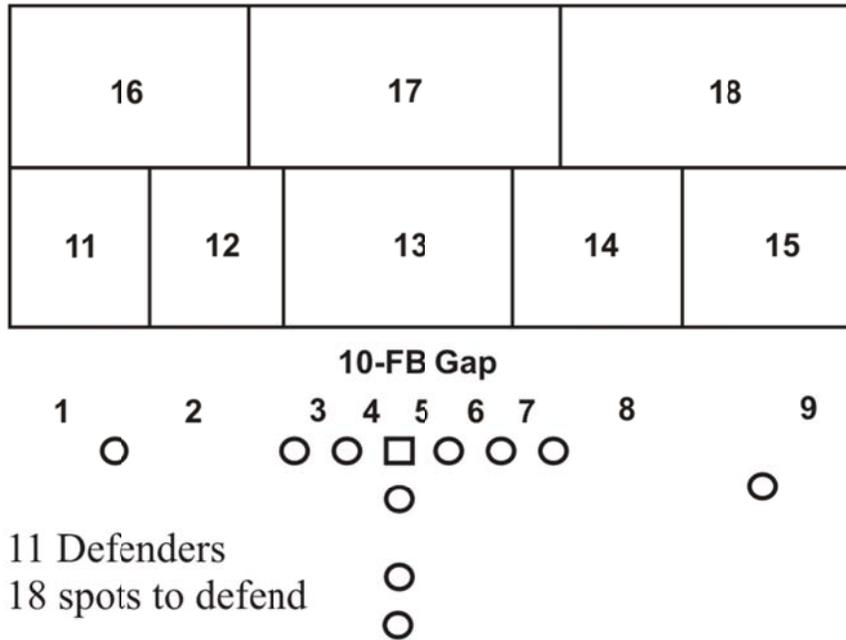

Figure 1-2 - 18 Areas to Defend

Coming from a defensive coach's mindset, 18 players on the field at one time would surely make defending the field a lot easier! However, since the rules only allow 11, a defensive coach must realize that each of his defensive calls will have certain strengths and weaknesses. For example, if a defense lines up with only six defenders in the box versus a one-back formation, their strength is in defending the pass and their weakness is in defending the run. They can play a variety of coverages, from man-free to quarter coverage. However, the offense has six blockers for the six defenders in the box, meaning the safeties will need to help on run support (dual responsibilities) or they cannot play true gap-control defense.   Conversely, if the defense puts seven defenders in the box, the defensive strengths and weaknesses are reversed.   Their coverage selection is more limited (and predictable!), but they have one more defender than the offense has run blockers.
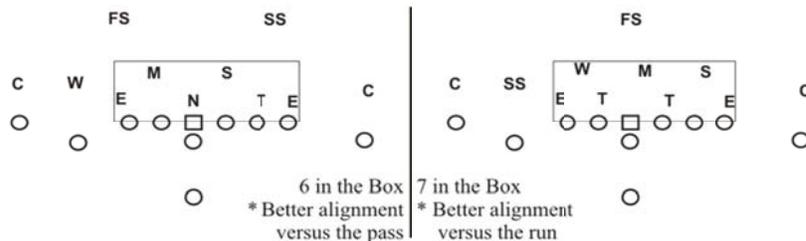

Figure 1-3 – Defensive Alignment Versus One-Back Set

The whole art of game analysis is predicting what play (or plays) an offense will *probably* run in order to call a defensive alignment and play to stop it. There are two different levels of "competition" on every snap to consider and scout: tactical competition and technical competition.

Tactical Competition Evaluations

Tactical competition is the offensive scheme and play-calling versus the defensive scheme and play-calling. This is a team's strengths, weaknesses and tendencies versus its opponent's strengths, weaknesses and tendencies. This book will primarily focus on tactical competition as it relies on the strength of computer analysis—probability and predictability.

Technical Competition Evaluations

Technical competition is the one-on-one battle where players pit their skill, speed and strength versus another player on the other team. It is focusing in on an individual player's skill sets, like drive-blocking or a quarterback's drop. While technical analysis is important to completely understand your opponent, it is something that is not easily analyzed by the computer. Rather, it takes in-person observation and detailed film study plus a deep knowledge of the game to recognize individual strengths

and weaknesses. For example, a look at the quarterback's drop might show that he has a tendency to hold the ball down low before he throws, making him vulnerable to being stripsacked. This will not show up on any computer reports, but this piece of information could make the difference in a close game. [Some techniques in technical scouting will be addressed in Appendix B.]

What information should I record?

This is a difficult question and answers will generally vary over time. One school of thought is to record every possible bit of data. While this is great in terms of being able to print a report on every conceivable metric, the time commitment to breaking down the coaching film and entering data can be too great. In addition, important information could possibly be lost in the pile.

The opposite school of thought is to record the minimum amount of information. While you can fly through the breakdown and data entry phases, there will be many reports that cannot be printed because the data is not entered into the computer, leaving vital questions unanswered. Thus, the first major question one must answer in the game analysis system—***What information do I need to record***?

The best way of determining what information to record is to first determine what reports are wanted in the end. If a coach wants a report showing all of the routes the outside strong receiver runs, then that information needs to be recorded. [Section 2 of this book goes into details on many data fields.]

When I was at the University of Florida, we used each of the fields discussed in this book at one time or another. However, we *never* used all of them at the same time. Different defensive coaching staffs had different report requests, resulting in the addition or subtraction of individual fields on a *yearly* basis.

Also, because this information is associated with video, any video data needs should also be taken into account when selecting the data fields to be collected. **The bottom line is you first need to determine what information you want/need to know in order to determine what data is needed to produce that information.**

Chapter 2 - Data Fields

Basic statistical analysis will give a coaching staff *some* information. However, this analysis will not be as complete and will often be more difficult to decipher and understand. There are four main differences between a game analysis <u>system</u> and basic statistical analysis. They are:

1. informational groupings

2. individual elements

3. computer calculations and

4. merge fields

#1 - Informational Grouping

In order to better understand the big picture of complex things, we tend to look to group similar things together in order to better grasp it. Football is no different. The advantages of grouping however extend beyond grouping just down/distance and field position together (i.e., short-yardage plays or goal line plays). For example, most defensive calls are made knowing only down/distance/field position and what type of the opponent's players are on the field (number of wide receivers, number of running backs, etc.). Yet, some defensive coaches don't look for tendencies based on offensive personnel. By grouping together all plays based on

what offensive players are on the field, a coach can get a better idea of the full range of plays the opponent might call before the offense ever lines up.

In addition to personnel groupings, similar formations should also be grouped together. Most systems ask you to provide the offensive formation as you see it. [Examples of similar offensive formations might be Flex Ace-3, Ace Gun-5, Ace Slot-3, Wing Ace-3, Ace-X, etc.] If you do not group similar formations together—in this case *Ace*—imagine the hardship of trying to analyze tendencies every time the opposing offense aligns in an Ace-type look.

Grouping tendencies by general alignment will provide critical keys to defensive plays and will help minimize the sometimes overwhelming volume of information if a team has a number of variations on a base formation.

A third example of grouping is by similar play types. A team might run three or four different types of screen passes and in certain reports it is important to know exactly what each screen is. However, there are other times you may just want to know that it was a screen pass in general without complicating reports and diluting the information. This calls for a method that will summarize all similar play types together into one group.

[Specifics regarding personnel, formation grouping, and play types as well as down/distance group and field position group fields are discussed in further detail in the next section of this book.]

#2 - Individual Elements

The ability to split fields into more basic pieces of information is just as important as grouping similar items together. Offensive formations and plays are two fields that are often composed of multiple elements that may need to be analyzed independently.

In the case of offensive formations, most programs have you enter the formation into one (or sometimes two) fields. I recommend using at least three fields to describe how a team was aligned at the snap of the ball— namely *set, strength* and *backfield*. Set is the alignment of the wide receivers and the tight ends. Strength is which direction (left or right) they align to. Backfield is the alignment of the running backs. Because these fields are separate, a coaching staff can analyze *just* backfield tendencies without the complication of wide receivers or tight ends, or analyze tendencies of base sets without considering the varying backfield alignments or formation strength. For example, a coach can look at every play the opponent ran when the backs aligned in an "I", regardless of how

the rest of the offense aligns. This ability to isolate part of an answer for

further analysis and study makes the information that much more valuable.

#3 – Field Calculations

Good computer scouting software programs should automatically fill in

as many data fields as possible based upon what you have already entered

for that play. For example, a boundary play is any play where the hash data

field value and the formation strength data field value are equal. Relying

on the user to determine if both values are the same and to enter a

positive answer into a third field is very time-consuming, prone to

mistakes, and unnecessary considering the ability of computers today.

Some of the fields that should be considered for computer calculation

based on other field values include hole hit, short yardage/goal line, red

zone/coming out, boundary, play direction, down/distance group, and field

position group.

#4 - Merge Fields

Just as informational groupings are important for the ability to analyze

similar plays together, there are some fields that are simply the

combination of different data fields into a single value. Having a single

value makes the reporting process easier, makes data columns on the

reports easy to read and align, and is quite useful if the data is exported out
to a video editing system. Some merge fields include down/distance,
personnel-FF (personnel field + formation grouping field), formation (set
field + backfield field), R/P-Type (R/P field + play type field).

Data Field Definitions

There are 66 different types of data fields (totaling 79 fields) explained
in the next four chapters of this book. Each field is explained in detail
individually. For each field description, a table can be found as the new
field description is started. Within each table you will find basic attributes
of the field such as field types, formula, field length and value limits. These
rows will only appear if it is appropriate for that field.

- FIELD TYPES – This is the type of field. Types are limited to either
  numeric (numbers only) or text (numbers and text) so any
  program, including a generic spreadsheet program like Microsoft
  Excel, is capable of handling this type of data.

- FORMULA – This row will note if the computer *should* be filling in
  the value for you. Whether or not it can be automatically done
  depends on your software. The types of formulas are:

- PERSISTENT – This formula will automatically fill in the values of the previous play. The only two persistent fields outlined in this book are quarter and score differential.

- AUTO – This formula calculates a numerical value based on the previous play. For example, a computer program should auto fill-in values such as down, distance and field position based on the previous play's values.

- MERGE – This formula is combining other data fields together into a "merged" value. The best example of this field is formation, which is the combination of set and backfield.

- CALCULATED – This formula will give a value (or not) based on the data found in other fields. The best example of this field is red zone/coming out, which places an "R" or "C" if the ball is at the appropriate yard line.

- **CALCULATED - These fields could be calculated by the computer, but there might be a desire to use it as a normal data field so the staff will have the flexibility to decide what the final value is.

- FIELD LENGTH – This is the character length of the field based on the terminology from this particular game analysis system. The length can be expanded or shortened depending on your own terminology.

- VALUE LIMITS – This refers to a limit of the values that are allowed to be entered. If there is a value limit list, no other values would be allowed to be entered into this field.

Chapter 3 - Situational Data

Situational data is the basic information about each play before any decisions are made by either team. This is the framework into which all other fields fit. This situational data section has three subsections—game situation, down/distance/field position, and other situational data.

There are many sources of situational data information in addition to gameday collection or videotape analysis. For NFL teams, this information is made available by the league office in the form of GSIS data. For collegiate teams, play-by-play reports produced by the media relations staff contain all of the situational information (and more).

In addition to requesting collegiate play-by-play lists from media relations staffs, many play-by-plays are found on athletic Internet websites as well as third-party websites that provide real-time data during football games. Unfortunately, there is no solution at the high school level.

Determination of the situation data still requires the watching of the video.

Game Situation

This data is used for identifying one play from another and grouping offensive drives together. There are five fields in this group: play number, quarter, series number, series sequence, and series begin.

(1) Play Number

Attribute	
FIELD TYPE	Numeric
FORMULA	**AUTO** - Starts at 1, advances by 1 per play
LENGTH	1

Play number is the simplest field because it is nothing more than a chronological listing of plays in a game. This numeric assignment should only include the opponent's offensive plays. If you are watching a tape that includes an opponent's defensive and special teams plays as well, disregard those other plays (such as punts and field goal attempts, regardless of the down and distance).

An average college or professional game will usually have about 170 total plays. This equates to 60-80 offensive plays, 60-80 defensive plays and 25-40 special team plays per game. In order to account for what happens on the field, even offensive plays that don't actually count due to a penalty (such as delays of game, pre-snap timeouts and other dead ball situations) are recorded as an offensive play.

(2) Quarter

Attribute	
FIELD TYPE	Numeric
FORMULA	**PERSISTENT**
LENGTH	1
VALUE LIMITS	1,2,3,4,5

This field records which quarter the individual play actually occurred during. If the game goes into overtime, record the entire overtime period as 5.

(3) Series Number

Attribute	
FIELD TYPE	Numeric
FORMULA	**AUTO** - Starts at 1, advances by 1 per Series
LENGTH	2

Every time the offense receives the ball from the other team, increase the series number by one. This includes after the opening or second half kickoff. The purpose of this field is to group each offensive series together. Most games average around 12-14 series a game.

(4) Series Sequence

Attribute	
FIELD TYPE	Numeric
FORMULA	**AUTO** - Starts at 1, advances by 1 per play until there is a series end value. Play after a series ends starts back at 1
LENGTH	2

As the play number field is a numeric listing of the entire game, the

series sequence field is a numeric listing within each series. Every time the

series changes, the series sequence field resets to 1. This makes finding the

first play of a series easy (as it is when the series sequence is 1).

(5) Series Begin

Attribute	
FIELD TYPE	Text
LENGTH	2
VALUE LIMITS	KO,PT,FM,IN,FG,EX,OT

When the offense receives the ball from the opposition, record how

the ball was received using the following two-letter abbreviations:

KO - Kickoff (including free kick following a safety)

PT - Punt   FM – Fumble   IN - Interception

FG - Missed FG   EX - Extra Point   OT - Other

SPECIAL SITUATIONS

If there is a *special teams* play where the defense has the ball temporarily before the offense regains control, it is a new series. Example - On 4th down, Team A punts to Team B, but Team B roughs the punter. The result of the penalty is a 1st down for Team A. Record series end on the 3rd down play as "PT" (punt). On the next play, record the series begin as other "OT" (Other), advance the series number by one and reset the series sequence to 1.

If there is an *offensive* play where the defense has the ball temporarily before the offense regains control, it is *not* a new series. [Example: Team A's running back fumbles and the ball is recovered by Team B's defense. While attempting to return the ball, the recovering defender fumbles and Team A recovers the ball.]

The reason for handling these two situations differently is that in the first case the offensive team left the field, while in the second case the offense did *not* leave the field.

Down/Distance/Field Position

As the group title suggests, these fields involve down, distance, and field position. In addition to the three basic fields, there are five other fields for grouping purposes to more easily summarize and analyze the data

later. These fields are D/D, DD Group, FP Group, short yardage/goal line,

and red zone/coming out.

(6)   Down

Attribute	
FIELD TYPE	**Numeric**
FORMULA	**AUTO** – based on distance, gain & series end
LENGTH	1
VALUE LIMITS	1,2,3,4,5

This is simply what the down is. Enter a 5 for two-point conversion

attempts.

(7)   Distance

Attribute	
FIELD TYPE	Numeric
FORMULA	**AUTO** – based on down, gain & series end
LENGTH	2

This is simply the distance remaining for a 1st down.

(8) D/D

Attribute	
FIELD TYPE	Text
FORMULA	**MERGE** – Combines the down value, a slash and the distance value together.
LENGTH	4

This field is made up by the down value, followed by a slash, and then

the distance value. The reason for this field is to simplify reports (one

column of info vs. two) as well as provide this merged information to a

video editing software system you might be using. Some teams will also

convert the down value of the 1st play of a series to a "P" rather than a 1.

In this way, P/10 and 1/10 plays are clearly differentiated from one

another.

(9) DD Grouping

Attribute	
FIELD TYPE	Text
FORMULA	**CALCULATED** – Based on down and distance values
LENGTH	20

In order to easily group *like* down and distances together, we use a

grouping indicator. Depending on the computer software you are using,

this field should be automatically filled in based on your entered values of

the down and distance fields.

The automatic fill-in function for this field is an important feature to look for in any scouting program. A desirable program should allow you to adjust the meaning of "long", "medium" and "short" for 2nd and 3rd down plays easily. The reason this is important is that different coaches and teams have different down and distance characteristics.

The rule of thumb is that the *short* groups for 2nd and 3rd down plays should be those down and distance situations when the team has a much higher characteristic to run, the *medium* groups are those when they are closer to 50/50 and the *long* groups are those who show strong pass characteristics. A few coaching staffs adjust this DD Grouping definition weekly to adjust to their opponent tendencies, but most do not.

Another consideration is the ability to divide 1st down plays into different groups. Ideas for group divisions could be if it is the first play of the series or not, or if it is 1st down and 11 yards or more, or any other possible division. If you want to see all the 1st down plays, the computer can either access individual 1st down field groups or it can group all of the 1st down plays together into one value.

One area of scouting often overlooked is looking at the down and distance situation based on the previous play's result. For example, a coach might have a totally different mindset on 2nd and long if he had run

the ball with no success on 1st down versus having thrown the ball on 1st

down with no success. This hidden tendency is rarely realized or studied by

coaches and could be quite valuable to predict play-calling during the

game.

Depending on your software, you may or may not be able to have the

same play appear in multiple groups at the same time. This is a very useful

feature as it will allow the coach to look at different DD Groups without

limiting the values from a larger group. [For example, having both a first

play of series group as well as an all 1st down groups]

CRITERIA
1st & 10 plays that are not the first play of the series
1st down that are first play of series
1st down and 11+ yards to go
1st down & less than 10 to go
All 1st downs
2nd and XL (11+)
2-10 after incomplete pass
2nd and long (7-10) after 1st down pass
2nd and long (7-10) after 1st down run
2nd and medium (4-6) after 1st down pass
2nd and medium (4-6) after 1st down run
2nd and short (1-3)
3rd and long (6-9)
3rd and extra long (10+)
3rd and medium (3-5)
3rd/4th and short (1-2)
4th and long (3+)

Table 3-1 - Sample of DD Grouping definitions

(10) Field Position

Attribute	
FIELD TYPE	Numeric
LENGTH	**AUTO** – 3, based on down, distance & gain

Field position is the actual yard line the play initially starts from prior to the snap. If the ball is on the offense's side of the field (more than 50 yards to go for a touchdown), put a minus sign in front of the yardage value. For example, if the ball is on the offense's own 20 yard line, this value would be -20. If the ball is on the defense's side of the field, the value will be +20. If the ball is on the 50 yard line, record it as +50. [Note that Field Position can never equal 0 (+0 = touchdown while -0 equals safety)]
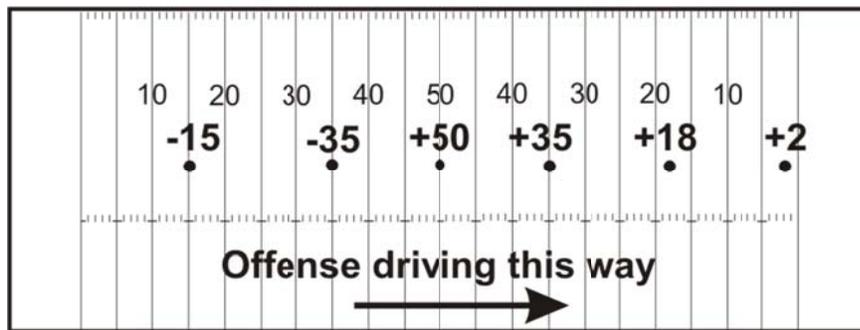
Figure 3-2 - Field Position Examples

(11) Field Position Grouping

Attribute	
FIELD TYPE	Text
FORMULA	**CALCULATED** – Based on down and distance values
LENGTH	20

Like the DD Group, this field is used to easily group plays together that occur in the same area of the field.   Different coaches have differing opinions as to the best way to break up the field and this should be up to each respective coach/staff. Some coaches also like to change the values weekly—especially red zone values—depending on a team's offensive philosophy. However, we rarely modified the values at the University of Florida.

CRITERIA
-1 to -15 (coming out)
-16 to -49 (open field)
+50 to +36 (plus zone)
+35 to +21 (fringe zone)
+20 to +13 (high red zone)
+12 to +4 (low red zone)
+3 to +1 (goal line)

Table 3-3 - Sample of Field Position Grouping definitions

(12) Short yardage/Goal line

Attribute	
FIELD TYPE	Text
FORMULA	****CALCULATED** – Based on down/distance and field position values
LENGTH	2
VALUE LIMITS	SY, GL

Even if you use the DD grouping field to define 3rd/4th and short or use the field position grouping to define goal line, this field is valuable in a variety of report formats to easily identify certain plays among other plays, especially in play list formats. If the play is a short yardage play, the computer enters a "SY". If the play is a goal line play, the computer enters a "GL". If a play is both a short yardage and a goal line plays, the computer will record this play as a goal line play. [My definition of a short yardage play is 3rd or 4th down and 1-2 to go and my definition of goal line plays is any play from the +3 to the goal line.]

Some teams will base the short yardage and goal line definitions based on offensive personnel instead of considering down/distance and field position. [For example, in order to be considered a short yardage play, some defensive staffs may require the offense to also align in a heavy personnel package. A four WR set on a 3rd and 1 play would not be considered short yardage in this situation.] If this is desired, the field will

need to be a data field and the user would need to mark the field based on the staff's definition.

(13) Red Zone/Coming Out

Attribute	
FIELD TYPE	Text
FORMULA	**CALCULATED** – Based on field position values
LENGTH	2
VALUE LIMITS	RZ, CO

Just like the short yardage/goal line field, this field is used to identify red zone or coming out plays. If the play is a red zone play, the computer enters a "RZ" (usually defined as +20 to +1). If the play is a coming out play, the computer enters a "CO" (usually -1 to -10, but can often vary).

SPECIAL SITUATIONS - TWO POINT CONVERSION

If it is a two-point conversion, it should be recorded as 5th and 3 on the +3. The series begin value will be "EX" (extra point) and the series end value will either be "TD" (touchdown) or "DN" (Down), based on the result of the play. [The series end field is discussed later] Don't forget to record this one play as a new series as the previous play would have had a series end value of "TD" (touchdown). The computer will put a "GL" in short yardage/goal line field and a "RZ" in red zone/coming out field.

Other Situational Data

Other data is just what the title implies—all other data that does not refer to play order or down, distance or field position. These four fields are horizontal ball position (hash), score indicators (score differential), game clock indicators (two/four minute), and other situations.

(14) Hash

Attribute	
FIELD TYPE	Text
LENGTH	2
VALUE LIMITS	R, RM, M, LM, L

The importance of hashmarks depends a lot on the level of play. Because there are such big differences in the width of the hashmarks from high school to professional football, there are dramatic differences in play-calling tendencies.

The question of whether the hash is considered left or right is based on either the quarterback's point of view (from the offensive perspective) or the middle linebacker's point of view (defensive perspective). Whatever point of view you decide to follow, all other left and right decisions (namely formation strength) *must* be done using the same perspective. For defense, the most common way is to use the middle linebacker's point of

view to determine right or left as it is easier for the defensive players to relate to this value on the field.

An easier assessment is just evaluating the position of the offensive tackle. If the OT (in a normal alignment) is between the hashmark and the sideline, rather than between the hashmarks, consider the hash as either left or right. If both offensive tackles are between the hashmarks, consider it in the middle. For high school hashmarks, widen the left/right definition and for professional hashes, shrink the left/right definition.

Some teams denote left middle hash (LM) and right middle hash (RM) to be more specific as to the ball's original location.

Figure 3-4 - Hashmarks
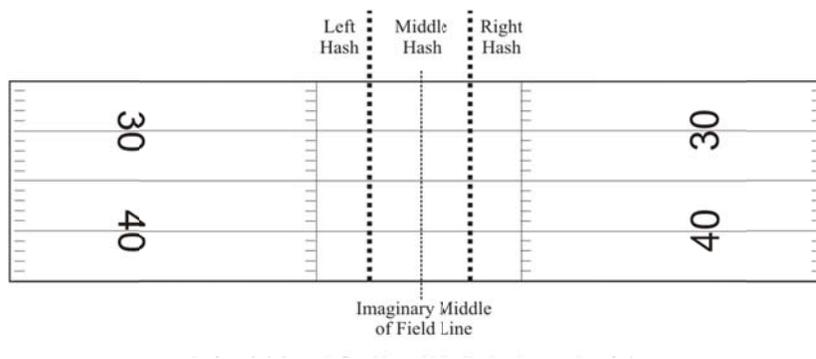
(15) Score Differential

Attribute	
FIELD TYPE	Numeric
FORMULA	**PERSISTENT**
LENGTH	3

Offensive play-calling changes considerably based on the score differential. In taking a look at all regular season NFL games for 4 seasons (2008-2011), if an offense team is ahead by 8 points or more, they are 11% more likely to run the ball in an attempt to run the clock and play conservatively regardless of other factors. Conversely, when behind 8 or more points, the offense was more than 18% more likely to throw the ball in an effort to create big plays and score quickly.

	PLAYS	PASS		RUN			
1st 3 series	35,119	19,299	55.0%	15,820	45.0%		
+/-3 pts	24,047	14,109	58.7%	9,938	41.3%	4%	more pass
minus 4-7	13,133	8,789	66.9%	4,344	33.1%	12%	more pass
minus 8+	25,310	18,451	72.9%	6,859	27.1%	18%	more pass
plus 4-7	11,763	5,951	50.6%	5,812	49.4%	4%	more run
plus 8+	19,544	8,560	43.8%	10,984	56.2%	11%	more run
TOTAL	128,916	75,159	58.3%	53,757	41.7%		

Table 3-5 – Run/Pass by Score Differential

Therefore, score differential has a big hand in coaches abandoning their normal play-calling tendencies. In your evaluation stage, you may

want to evaluate a team's play-calling without including one extreme or the other.

CODE	GROUP	CRITERIA
3	First three series of game	Series <=3
E	Even	Score is plus or minus 3 points
B	Behind	Offense losing by 4-7 points
B+	Behind big	Offense losing by 8+ points
A	Ahead	Offense winning by 4-7 points
A+	Ahead big	Offense winning by 8+ points

Table 3-6 - Sample of Score Differential groups of reports

The value of this field can either be a set scale (as shown in the table) or simply the offensive team's score minus the defensive team's score. Option two would produce a result with positive numbers when the offense is winning and negative numbers when the offense is losing. For example, the team you are scouting has a score of 20 and their opponent's score is 14, the score differential is +6.

(16) Two/Four Minute

Attribute	
FIELD TYPE	Text
LENGTH	2
VALUE LIMITS	2H, 2G, 4, F

Just as score differential affects offensive play-calling, the clock also factors into play-calling. If the offense is in its two-minute or hurry-up

offense, mark a "2" in this field to (1) be able identify these plays among other plays in certain report formats, or (2) select or omit these plays. We can further expanded these field to denote if it was a two minute situation before half ("2H") or a two minute situation at the end of the game ("2G"). Some coaches will have different two minute tendencies based on first half versus second half.

It is also possible to mark "F" for fast pace offense. This is when a team in not in a two-minute situation, but is running plays at a very fast tempo. Some teams have only a limited number of plays they can run at a fast tempo and it is worth study to see how play calling varies from normal rhythm to up-tempo.

In addition, you should denote when a team is in an obvious four minute offense, when the offense is attempting to run as much time off the clock as possible. Eliminating these plays from consideration will also give you a better evaluation of their base offense.

(17) Situations

Attribute	
FIELD TYPE	Text
LENGTH	8

This is a field to mark specific plays to check if the opposing coach has hidden tendencies. Among the possibilities of this field is the first 1st down after crossing the 50 yard line ("1-50") or a play after a called timeout ("TO"). A lot of situations, such as first 15 plays of the game or play after a turnover can be determined by data entered in other fields. This field is to mark those type of plays that can't be determined by other means.

SITUATIONS THAT WOULD NEED TO BE MARKED IN THIS FIELD	CODE
First 1st and 10 play after crossing the +50	1-50
First 1st and 10 play after crossing the +25	1-25
Play after timeout	TO
SITUATIONS THAT CAN BE DETERMINED BY OTHER FIELDS (Not needed to be marked in this field)	
First play of game	Play Number = 1
First play of second half	Quarter = 3 and previous quarter =2
Sudden change	Series begin = FM or IN
P-10 after turnover	Previous series end = FM or IN
Play after sack	Previous pass result = S
Play after TFL	Previous gain <0 and previous pass result <> S

Table 3-7 - Sample of Situation definitions

Chapter 4 - Formation Data

Formation data refers to what type of offensive players are on the field and how they align/move prior to the snap. I will describe using 15 different formation data fields to accomplish this task. The fields are personnel, formation group, formation strength, set, shotgun, backfield, formation, alignment, boundary, movement, audible/no-huddle, shotgun, bunch, strong-side split and weak-side split.

(18) Personnel

Attribute	
FIELD TYPE	Text
LENGTH	3

One of the most important items to know is what offensive personnel are on the field. Every formation has 11 players. Within every formation, there are five offensive linemen (ineligible players numbered between 50 and 79). This leaves six players Since 99.9% of all plays have a quarterback on the field, the personnel data field needs to only track who the other five players are (i.e. how many running backs, tight ends and/or wide receivers are on the field).

> *7.1.b.1 At least seven players on their scrimmage line, not less than five of whom shall be numbered 50 through 79. The remaining players must be either on their scrimmage line or behind their backfield line.*
>
> *7.2.3 Eligibility rules apply during a down when a legal forward pass is thrown. All defensive players are eligible to touch or catch a pass. When the ball is snapped, the following offensive players are eligible:*
>
> > *a. Each player who is in an end position on his scrimmage line and who is wearing a number other than 50 through 79.*
> >
> > *b. Each player who is legally in his backfield wearing a number other than 50 through 79*
> >
> > *c. A player wearing a number other than 50 through 79 in position to receive a hand-to-hand snap from between the snapper's legs.*

Insert 4-1 – Collegiate Offensive Personnel Rules

> *7.5.1 Offensive Team: The offensive team must be compliance with the following at the snap:*
>
> > *a. It must have seven or more players on its line and*
> >
> > *b. Eligible receivers must be on both ends of the line and all of the players on the line between them must be ineligible receivers.*
>
> *5.1.2 All players must wear numerals on their jersey in accordance with Rule 5, Section 4, Article 3(c). Such numerals must be by playing positions as follows:*
>
> > (a)   *quarterbacks, punters and placekickers: 1-19*
> > (b)   *running backs and defensive backs: 20-49*
> > (c)   *centers : 50-79*
> > (d)   *offensive guards and tackles: 60-79*
> > (e)   *wide receivers: 10-19 and 80-89*
> > (f)   *tight ends: 80-89*
> > (g)   *defensive linemen: 50-79 and 90-99*
> > (h)   *linebackers: 50-59 and 90-99*

Insert 4-2 – NFL Offensive Personnel Rules

I recommend using a two digit personnel number to refer to the offensive personnel. **<u>The personnel number code is the number of running backs, followed by the number of tight ends</u>**. For example, if there are two running backs, a tight end and two wide receivers (in addition to the QB and five OL), the personnel number is 21. If there is one back, a tight end, and three wide receivers, the personnel number is 11.

Versus UF Defense 1996-200				NFL Regular Season 2011		
Pers	Snaps	Percent		Pers	Snaps	Percent
21	1,271	28.9%		11	13,034	40.3%
11	1,031	23.5%		12	6,970	21.6%
20	695	15.8%		21	6.004	18.6%
10	569	12.9%		22	2,833	8.8%
12	440	10.0%		10	1,005	3.1%
22	224	5.1%		20	761	2.4%
Others	165	3.8%		00	702	2.2%
				Others	997	3.1%
	4,395				32,306	

Chart 4-3 – Offensive Personnel versus UF Defense 1996-2000

In the case of "in-between" players, you must classify them as either as a running back, a tight end or a wide receiver. For example, some teams might have an "H" back or some other unique position on their depth chart. In these cases, classify players as a running back if he ever receives a handoff from the quarterback (wing man in a Wing-T offense or spread back in the spread offense) and/or if he normally aligns in the backfield, as a tight end if he does not get handoffs and normally aligns near the offensive tackles (either on or off the LOS), or as a wide receiver if he normally aligns out wide and would be a difficult matchup for a linebacker to cover.

Some coaches prefer using names to refer to personnel groups rather than numbers. Examples include name of cards (King, Queen, Jack) or colors (Blue, Green, Red). This is acceptable as long as everyone is on the

same page. The idea is to pre-define each of the possible groups with a unique code (or number) so there is no confusion among coaches and players, especially during the pressure of a game.

The reason I recommend using the number system is the ability to use the first digit (the number of running backs) is to be able to group personnel numbers by backs. To group any play where there are only two backs on the field, pull any personnel code between 20 and 23. For three running backs, select any code between 30 and 32.

The reason the second digit is for tight ends rather than wide receivers is generally because linebackers cover both running backs and tight ends while defensive backs cover wide receivers. Denoting the number of backs and tight ends make it easier to know the number of "big" skill players on the field versus the number of wide receivers.

The number of wide receivers can easily be calculated by adding the two digits together, and then subtracting it from five. For example, 22 personnel has one wide receiver (2 RBs + 2 TEs = 4 -- 5 – 4 = 1) and 10 personnel has four wide receivers (1 RB + 0 TE = 1 -- 5 – 1 = 4). I suggest using the two digit number rather than a three digit number as it is easier to communicate, especially during tense gameday situations.

Although this is a general rule that does not apply to all teams, there is a quick way to guess the run/pass possibility based on this number. If you add the two digits that make up the personnel number together, the higher the number, the greater the run possibility increases. The only exception is if the first digit is a zero (no running backs on the field). If so, treat the sum of numbers as zero as well.

Sum of two digits	Qty	R/P Ratio
0 (00/01/02)	96	92.7% Pass
1 (10)	569	73.1% Pass
2 (11/20)	1,726	69.3% Pass
3 (12/21/30)	1,711	53.7% Run
4 (13/22/31)	232	79.7% Run
5 (14/23/32)	61	80.3% Run

Chart 4-4 – R/P Ratio of Personnel vs. UF Defense 1996-2000

Sum of two digits		Qty	R/P Ratio	
"0" (no backs)		702	94.7%	pass
"1" (10)		1,005	87.1%	pass
"2" (11/20)		13,795	75.8%	pass
	11 pers	13,034	76.4%	pass
	20 pers	761	66.1%	pass
"3" (12/21/30)		13,002	52.1%	pass
	12 pers	6,970	58.6%	pass
	21 pers	6,004	55.4%	run
"4" (13/22/31)		3,623	64.1%	run
	22 pers	2,833	65.0%	run
"5" (14/23/32)		179	66.5%	run

Chart 4-5 – R/P Ratio of Personnel in NFL regular season 2011

Sometimes there are different "players" in the same personnel group, such as two true running backs and a tight end rather than a running back, a fullback and a tight end. These differences can be denoted by adding a letter after the numerical code. In the example above, we would denote 2 true RBs and a TE as 21P. Another popular variation in the NFL is OL as eligible TEs. We denote the personnel as if he is a TE, then add "OL" to the back. For example, 2 receivers, 1 RB, 1 TE and 1 eligible OL would be "22OL".

(19) Formation Group

Attribute	
FIELD TYPE	Text
LENGTH	10

Formation groups are directly related to the personnel number. Once you determine the personnel number, you will only have up to four possible choices for the formation groupings. There are a total of 23 different types of formation groups (not counting special exceptions).

Formation groups are based solely on the placement of wide receivers and tight ends on either side of the center. Note that running back placements have no role in defining formation group. Running back

placement is defined in the backfield field, which is discussed in detail later.
Even if a running back is lined up in a normal WR or TE slot, they are not
considered when defining this field.

Some coaches prefer to use the same name to refer to a formation
regardless of the personnel value. For example, a "2x2" might be called
Doubles, regardless if it was 10, 11 or even 12 personnel on the field. I
don't recommend this as personnel and formation group information might
not always appear together in reports. In this case, you wouldn't know
who comprised the Doubles formation. In this system, a "2x2" out of 10
personnel would be Doubles, 2x2 out of 11 personnel would be Ace and
2x2 out of 12 personnel would be Tech or TE Ace.

For the purpose of diagramming the formation groups, the wide
receivers are shown as white circles, tight ends are shown as black circles
and all others are shown as gray circles.

NO BACK FORMATIONS

00, 01, 02, 03 PERSONNEL = EMPTY / QUADS
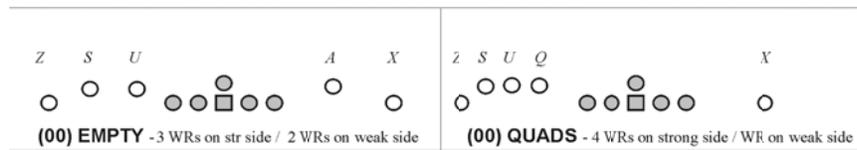
Figure 4-6 - No Back Formation Groups

10 PERSONNEL = DOUBLES / TRIO

11 PERSONNEL = ACE / TRIPS / TRYPS

12 PERSONNEL = TECH / TECH TWINS / TE ACE / TE TRIPS
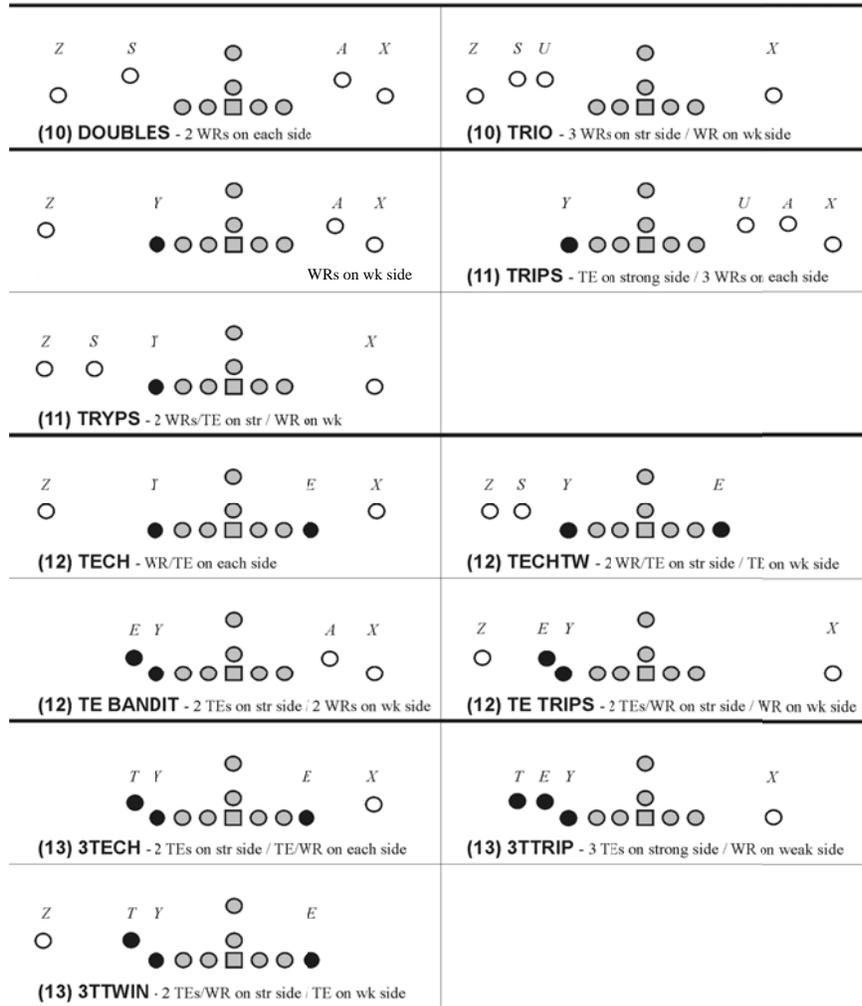
Figure 4-7 - One-Back Formation Groups

TWO-BACK FORMATIONS

20 PERSONNEL = 3 WIDES

21 PERSONNEL = PRO / TWINS

22 PERSONNEL = PROT / TE PRO

23 PERSONNEL = 3 TE

(20) 3 WIDE - 2 WR on strong side / WR on weak side

(21) PRO - WR/TE on strong side / WR on weak side

(21) TWINS - TE on strong side / 2 WRs on weak side

(22) PROT - WR/TE on strong side / TE on weak side

(22) TE PRO - 2 TEs on strong side / WR on weak side

(23) 3TE - 2 TEs on strong side / TE on weak side
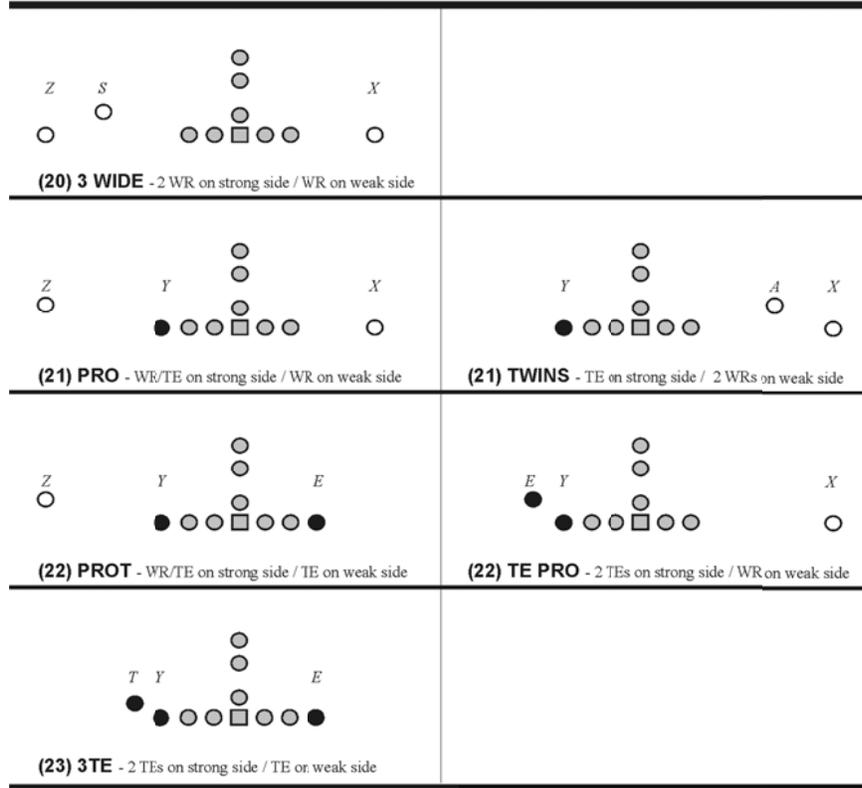
Figure 4-8 - Two-Back Formation Groups

THREE-BACK FORMATIONS

30 PERSONNEL = SPLIT

31 PERSONNEL = 3 BACK

32 PERSONNEL = TIGHT

3 Back Sets

(30) SPLIT - WR on each side

(31) 3 Back - TE on strong side / WR on weak side

(32) TIGHT - TE on each side
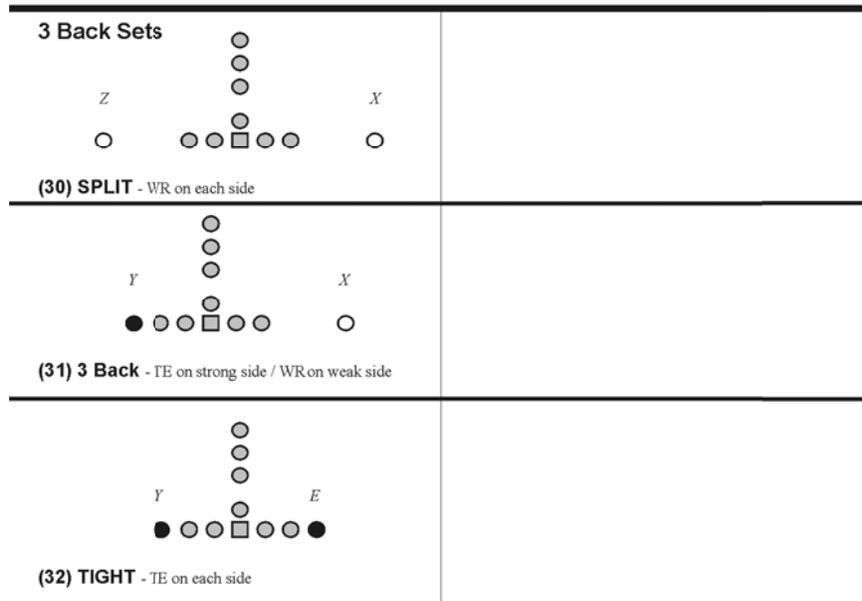
Figure 4-9 - Three-Back Formation Groups

Not every alignment can possibly be covered in this section. However, these 23 formation groupings can account for the vast majority of them. In my last four years at UF, we recorded a total of 4,395 plays played against our defense and only 37 plays could not be grouped. That means 99.2% of

all plays we scouted were grouped into one of these 23 groups. Of the 37

exceptions, these plays could be grouped into three types of exceptions.

The first type is when a player other than the QB aligns to take the

direct snap from center to either run or pass the ball (the 'Wildcat,' for

example). For Wildcat formations, I recommend adding "WC-" to the

beginning of the formation group name, such as WC-ACE or WC-TRIO. If

the QB stays on the field, treat him as a WR.

The second type is when a WR or a TE aligns in the backfield, creating a

pass covering mismatch against a linebacker, or getting into a running-

backfield alignment after the defense has aligned in a pass-defending

personnel group and alignment. For these formations, add the personnel

to the end of the formation group name. For example, if the TE aligns in

the backfield as a fullback, call it "Pro-12" (it looked like Pro formation

group, but consisted of 12 personnel on the field)

The third type occurs when the offensive linemen align in a unique

location in order to try to catch the defense off-guard. For these, develop

your own formation group name that is both unique and descriptive.
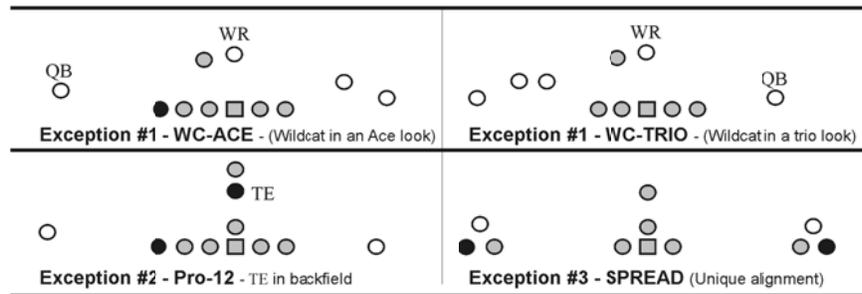
Figure 4-10 - Formation Group Exceptions

POSITION LETTER CODES

As you might have noticed in the formation grouping diagrams, wide receiver and tight end letter designations are determined by their location in relation to the formation strength. The purpose of designating the receiver's letter by location is to group receiver routes and jersey number by the general alignment to the formation strength. All eligible receivers are numbered from the outside receiver on the strong-side to the outside receiver on the weak-side. Number the receivers using the terms #1 strong, #2 strong, #3, #2 weak and then #1 weak. For example, if there is a wide receiver aligned as the farthest out from the center to the formation strength, he is #1 strong and therefore always a "Z". If any eligible receivers are stacked one behind another, the one closer to the LOS is numbered first.

#1 Strong WR = Z	#2 Strong WR = S	#3 WR = U
#2 Weak WR = A	#1 Weak WR = X	

Special exception - if there are four WRs on one side, #4 is designated by the letter "Q" (for Quads)

Tight end letter designation is defined first by the number of tight ends and then by the location within each formation. If there is only one TE, he is always a "Y". With multiple TE sets, the letter assignments are generally done by the strong-side TE on the LOS, followed by weak-side TE on LOS, followed by strong-side TE off LOS. See the formation group charts for exact letter assignments.

1st TE = Y   2nd TE = E   3rd TE = U
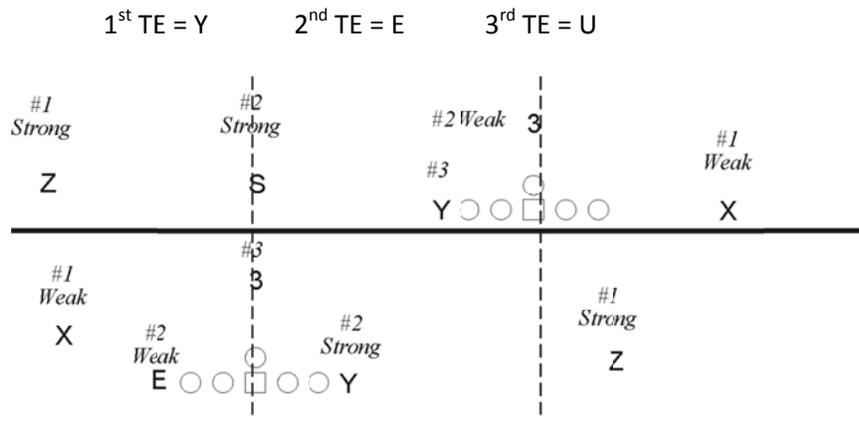
Figure 4-11 – Position Letter Codes

UNBALANCED FORMATIONS AND COVERED RECEIVERS

Unbalanced is a term used to designate a situation where two receivers are on the LOS on the same side of the formation AND all other eligible receivers are located on the same side on the center. If all receivers are on one side of the formation, then use the term "Unb" followed by the personnel number as the formation group. If there are receivers on both sides of the formation, but two receivers on the same side of the formation are on the LOS, use the standard formation group that describes the receivers' locations and make the adjustment in the set data field with the
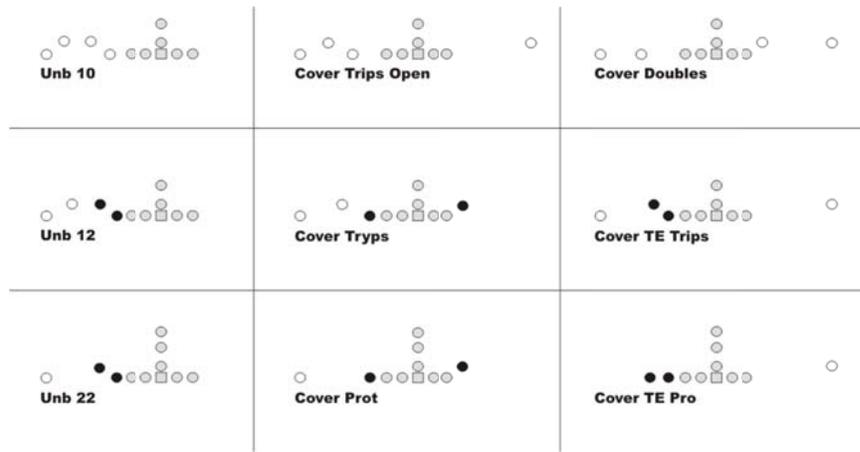
prefix of "Cover" (See 'set' for more information)

Figure 4-12 - Unbalanced Formations

(20) Formation Strength

Attribute	
FIELD TYPE	Text
LENGTH	1
VALUE LIMITS	L, R

Once you have determined the formation group, you will need to

determine the formation strength. All of the formation group diagrams are

shown as strength left (MLB's point of view).

There are two main decisions to make in developing your system

regarding formation strength.

Your first decision is whether or not to define the formation strength

first by the tight end location or by the number of possible pass receivers.

The decision will most likely depend on your defensive scheme. We did it

both ways at UF depending upon our scheme and defensive coordinator.

If your secondary's alignment is independent of your defensive front,

then you will probably prefer to assign strength based on pass receiver

threats. If your secondary's alignment is dependent on the front alignment

and the front alignment is based on the front strength, you will want to

base strength on the TE location. [Note that all of the formation grouping

diagrams in this book are shown as strength left based on the TE location.]

Your second decision is whose point of view you want to use—either

the quarterback's or the middle linebacker's. This is important because the

quarterbacks' right is the middle linebacker's left.

As discussed previously, the same point of view you use to determine

formation strength (QB's or MLB's) needs to be the same point of view you

need to use to determine the hash value.

RULES FOR FORMATION STRENGTH BASED ON TE LOCATION
Check the following rules until fulfilled.
1.) If one side has more tight ends than the other side, the call is to that side.
2.) If the tight ends are balanced (or not there), but there are more wide receivers on one side of the formation than the other, the call is to the side of more wide receivers.
3.) If TE and WRs are both balanced, but the ball is on a hash, the call is to the field.
4.) If balanced and in the middle of the field, strength is right. We defined it to the right because most quarterbacks are right handed and therefore throws to the right are generally easier than throws to the left in terms of footwork and vision.

RULES FOR FORMATION STRENGTH BASED ON PASSING STRENGTH
Check the following rules until fulfilled.
1.) If one side has more eligible receivers than the other side, the call is to that side.
2.) If the eligible receivers are balanced, but there are more wide receivers on one side of the formation than the other, the call is to the side of more wide receivers.
3.) If TE and WRs are both balanced, but the ball is on a hash, the call is to the field.
4.) If balanced and in the middle of the field, strength is right. We defined it to the right because most quarterbacks are right handed and therefore throws to the right are generally easier than throws to the left in terms of footwork and vision.
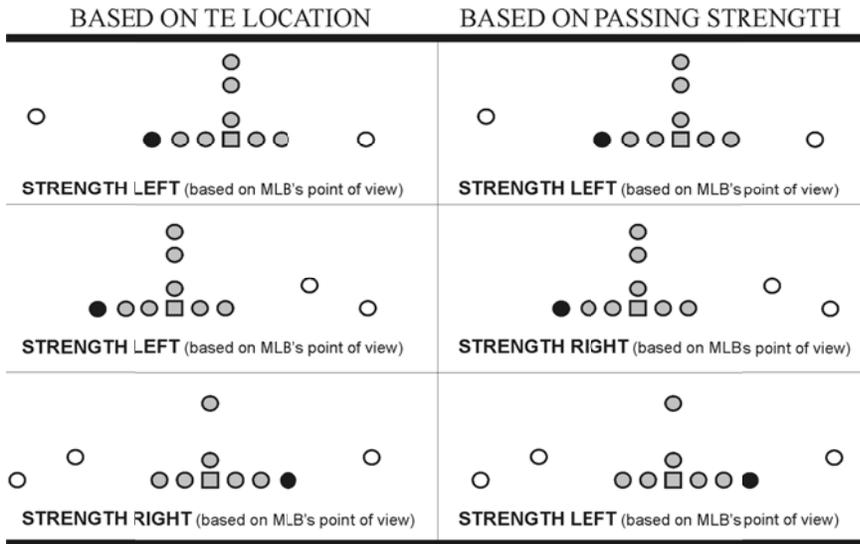
Figure 4-13 - Formation Strength

(21) TE Location

Attribute	
FIELD TYPE	Text
LENGTH	1
VALUE LIMITS	L, R

If you define the formation strength field based on passing strength

rather than TE location, record the TE location in the field. If you define

formation strength based on TE location, you do not need to use this field.

(22) Set

Attribute	
FIELD TYPE	Text
LENGTH	18

The root of every set is its formation group name. Adjustment prefixes and/or suffixes will be added to denote any alignment changes to the set in comparison to the way they appear on the formation group pages. Any adjustments that occur on the **strong-side of the set will be listed in front** of the formation group name. Any adjustments that occur on the **weak-side will appear behind** the formation group name. You can have multiple prefixes, multiple suffixes, or any combination of both prefixes and suffixes to correctly describe a given set. Note that if there is motion on the play, describe the set at the moment the ball is snapped. Any motions will be denoted in the movement field that is described later in this chapter.

FX
(Flex)
TE is 4 or more yards off OT
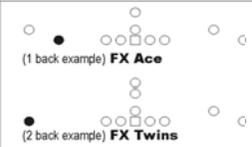
(1 back example) **FX Ace**

(2 back example) **FX Twins**

BU
(Bunch)
2 or more receivers are 3-4 yds apart and are 4 or more yds from OT
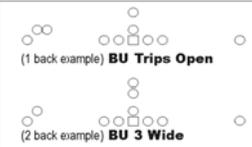
(1 back example) **BU Trips Open**

(2 back example) **BU 3 Wide**

TO
(Tackle Over)
Backside OT lines up on strongside. TE does not switch places.
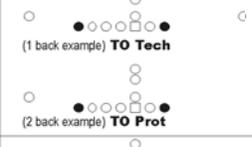
(1 back example) **TO Tech**

(2 back example) **TO Prot**

IN
(Inverse)
** 2 receiver side only
Receivers switch normal position on/off LOS
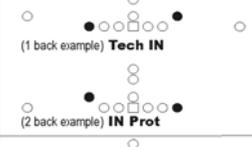
(1 back example) **Tech IN**

(2 back example) **IN Prot**

NUB
(Nub)
TE and backside OT exchange places
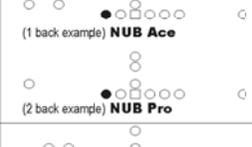
(1 back example) **NUB Ace**

(2 back example) **NUB Pro**

EX
(Exchange)
** 2 receiver side only
TE and WR exchange normal alignment position
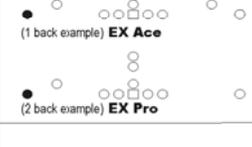
(1 back example) **EX Ace**

(2 back example) **EX Pro**

NR
(Near)
WR is 1-3 yds off OT and is on LOS

(1 back example) **Tryps Open NR**

(2 back example) **Pro NR**

A
(Inverse type "A")
** 3 receiver side only
Receivers switch normal position on/off LOS with middle receiver being on LOS

(1 back example) **A Trips**

SL
(Slot)
WR is 1-3 yards off OT and is off LOS
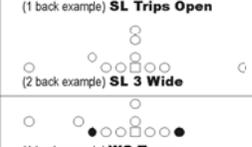
(1 back example) **SL Trips Open**

(2 back example) **SL 3 Wide**

B
(Inverse type "B")
** 3 receiver side only
Receivers switch normal position on/off LOS with either inside or outside receiver being on LOS

(1 back example) **B Tryps Open**

WG
(Wing)
WR is 1-3 yards off TE and off LOS
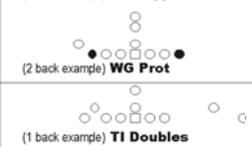
(1 back example) **WG Tryps**

(2 back example) **WG Prot**

XA
(Exchange type "A")
** 3 receiver side only
TE and WR exchange normal alignment position with TE becoming middle receiver
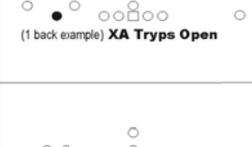
(1 back example) **XA Tryps Open**

TI
(Tight)
2 or more receivers are 3-4 yds apart and are 1-3 yds from OT
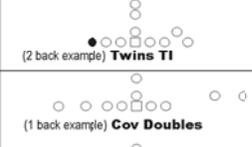
(1 back example) **TI Doubles**

(2 back example) **Twins TI**

XB
(Exchange type "B")
** 3 receiver side only
TE and WR exchange normal alignment position with TE becoming outside receiver
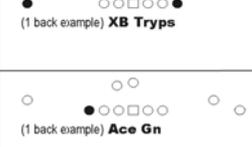
(1 back example) **XB Tryps**

COV
(Cover)
2 or more receivers on the same side of the center on the LOS
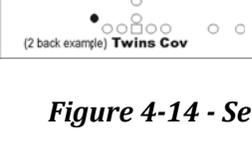
(1 back example) **Cov Doubles**

(2 back example) **Twins Cov**

GN
(Shotgun)
Quarterback in a shotgun alignment behind the center
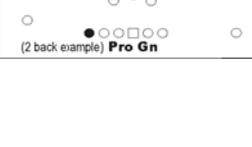
(1 back example) **Ace Gn**

(2 back example) **Pro Gn**

Figure 4-14 - Set Adjustments

In addition to the adjustment prefixes and suffixes as described above,

any no-back sets must also be described in further detail to account for the

players' exact alignment. The reason Empty and Quad formation groups

are different from all other groups is because Empty or Quads can be any

Personnel combination of wide receivers and tight ends possible from 00 to

03. In order to define Empty formation groups, imagine the #1 weak

receiver is not there and then describe the formation group that would

exist. (See figure 4-13) Add this value as a suffix to the root "Empty". For

Quad formation groups, imagine the #1 strong receiver is not there and

add this value as a suffix to the root "Quad". Any other formation prefixes

and suffixes can also be used in conjunction to this naming method of

empty backfield sets.
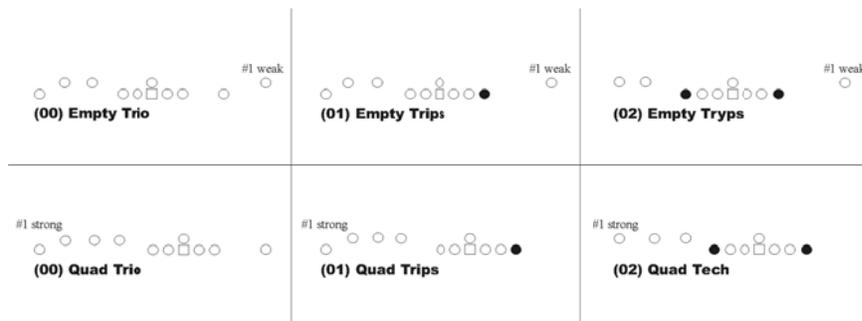
Figure 4-15 - Empty & Quad Formations

(23) Shotgun

Attribute	
FIELD TYPE	Text
LENGTH	1
VALUE LIMITS	G

Just as the field name applies, this field records if the quarterback

aligns in a shotgun alignment. Play calls, especially running plays, differ

based on if the QB is in a shotgun alignment or not.

(24) Backfield

Attribute	
FIELD TYPE	Text
LENGTH	3

There are 18 different types of standard backfields with hundreds of

possible varieties. Backfields are based upon the backfield chart, which in

turn is based upon formation strength. [Note that if there is backfield

motion on the play, backfield should be defined as it is the moment the ball

is snapped.] Any motions will be denoted in the movement field that is

described later in this chapter.

Figure 4-16 - Backfield Number Locations

If there are no running backs in the field (personnel groups that start

with a 0), the backfield value is automatically "EM" for empty backfield.

STANDARD ONE-BACK BACKFIELD SETS

3 - Tailback's standard location (behind QB/4 or more yards deep)
2 - Fullback's standard location (behind QB/within 4 yards)
4 - Tailback shifted to formation strength
5 - Tailback shifted away from formation strength
P – Pistol alignment (QB shotgun with RB directly behind)
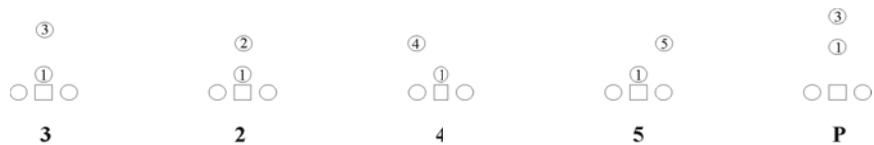
Figure 4-17 - One-Back Examples

STANDARD TWO-BACK BACKFIELD SETS

I - Fullback in the "2" location, tailback in the "3" location
IN - Fullback in the "4" location, tailback in the "3" location
IF - Fullback in the "5" location, tailback in the "3" location
NR - Fullback in the "4" location, tailback in the "2" location (backs on
       the same level)
FR - Fullback in the "5" location, tailback in the "2" location (backs on
       the same level)
SP - Running backs in the "4" and the "5" locations
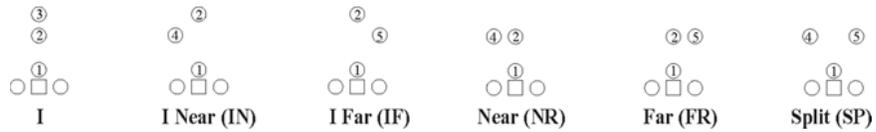
Figure 4-18 – Two-Back Examples

STANDARD THREE-BACK BACKFIELD SETS

STK - (Stack I) All three backs in a straight vertical line - a "2", a "B", and a
          "3" (Designate the middle back with the letter B)
T - (T) All three backs in a straight horizontal line - a "4", a "3", and a "6"
          (Use a "3" rather than a "2" to denote a difference between a T
          backfield and a wishbone backfield.)
BON - (Wishbone) All three backs in a horizontal line with the fullback
          moved up closer to QB - a "4", a "2", and a "6"
SHO - (Shoot) Double wing set with fullback - a "6", a "2", and a "7"
FR6 - (Wing-T Strong) - A far set (a "2" and a "5") with the third RB in the
          strong wing position ("6")
NR7 - (Wing T Weak) - A near Set (a "2" and a "4") with the third RB in the
          weak wing position ("7")
PIS - (Power I Strong) I backfield with a third offset back to the formation
          strength - a"2", a"3", and a "4"
PIW - (Power I Weak) I backfield with a third offset back away from the
          formation strength - a"2", a"3", and a "5"
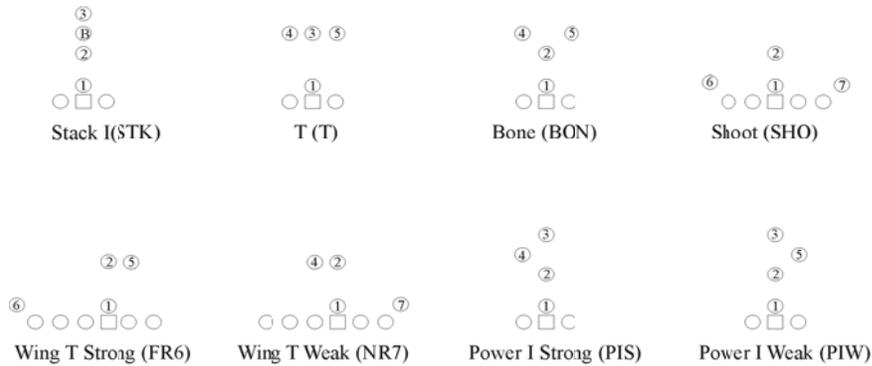
Figure 4-19 – Three-Back Examples

UNUSUAL BACKFIELDS

Unfortunately, not every backfield fits one of the standard definitions. For one or two-back backfields, use the backfield numbering chart and the wide receiver letter chart to define the location of the backs. Remember to remain constant in your definitions as computer software considers 2X and X2 two different backfields. A good rule of thumb is to always place numbers before letters. If there are two numbers or two letters, I suggest numbers before letters and placed in alphabetically order. This helps in naming consistency.

For three-back unusual backfields, try to combine some of the standard two-back backfield definitions with an additional number/letter to describe the third back. (i.e. a I6 backfield is an "I" backfield - a "2" and a "3" - with an additional back aligned as a strong wing -"6")
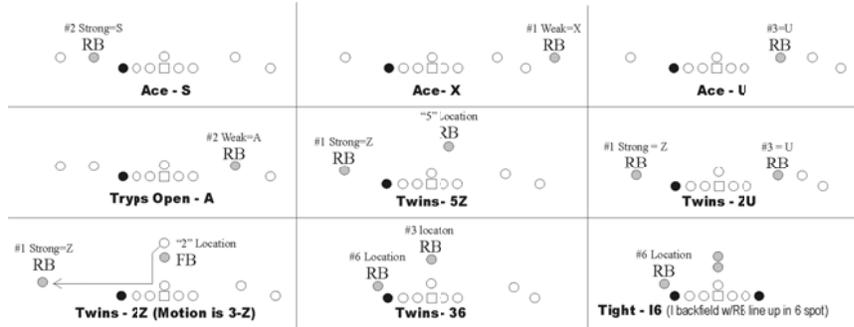
Figure 4-20 - Unusual Backfields

(25) Formation

Attribute	
FIELD TYPE	Text
FORMULA	**MERGE** – Combination of formation and backfield
LENGTH	22

This field is the merged values of set and backfield with a dash in-between. (i.e. If set is "Fx Ace Gn", and backfield is "4", formation would be "Fx Ace Gn-4") This will allow reports to consider the entire specific alignment of all 11 offense players in one field.

(26) Alignment

Attribute	
FIELD TYPE	Text
LENGTH	3

Alignment refers to alignment of all eligible receivers on either side of the center. For example, both 10 personnel Doubles formations and 11 personnel Ace formations are aligned in a "2x2" look. This field value is the number of eligible receivers (including running backs) located out of the backfield on the strong-side, followed by a "x", then the number of eligible receivers on the weak-side (including running backs). It does not count any players in the backfield. Based on where the running back aligns, an Ace formation could easy be a "2x2", a "3x2" or a "2x3". If a WR was to motion

in the backfield to join a running back, the alignment number could then be "2x1" or "1x2". The purpose is to be able to evaluate route combinations out of similar alignments, regardless of different personnel, sets and backfields, as well as understand the possible defensive adjustments and plays they could face based on receiver locations.
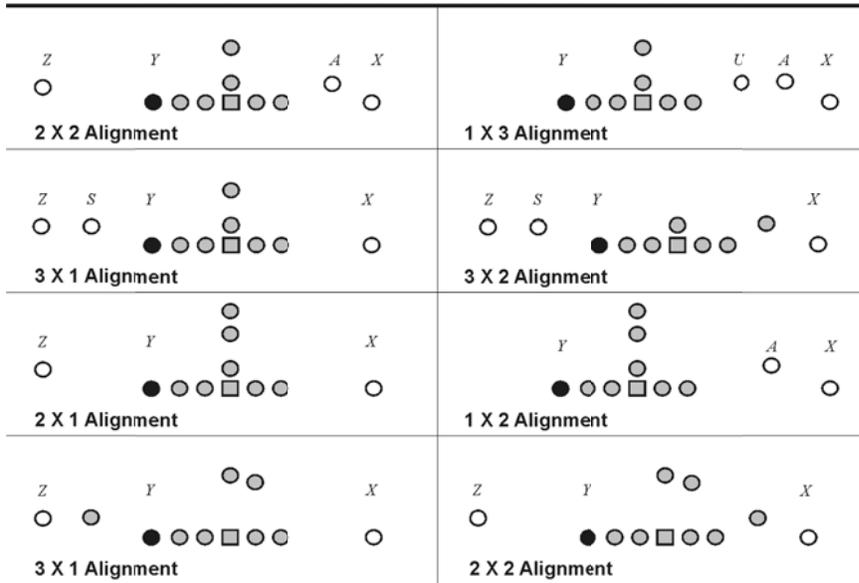
Figure 4-21 – Alignment Examples

(27) Boundary

Attribute	
FIELD TYPE	Text
FORMULA	CALCULATED – Based on hash and strength values
LENGTH	1
FIELD VALUES	B

Boundary plays are any plays in which the hash value and the formation strength are equal. If you use the TE location field, the boundary formula would be "B" if the TE location and hash values are equal. In other words, these are formations in which the running strength of the formation is to the short side of the field rather than the wide side of the field.

Offensive coaches might align their formation to the boundary in order to isolate wide-field defenders or to get a specific defensive alignment and the use and frequency of such occurrences are important to analyze.

Motions, Shifts & Trades Fields

As the title suggests, all pre-snap movement are categorized into three groups—motions, shifts & trades. Motion is the pre-snap movement of one player that may or may not still be in motion at the time the ball is snapped. A shift is the simultaneous movement of more than one player with all of them coming to a complete stop for at least one second prior to the snap of the ball. Trade is the tight end shifting from the end man

position of the offensive line to the other end man position on the

offensive line and resetting. [Note that tight end motion where the tight

end does not reset as the end man on the line of scrimmage is defined as a

motion, not a trade.]

> *7.1.5.a If a play is preceded by a huddle or shift, all players of the offensive team must come to an absolute stop and remain stationary in their positions, without movement of the feet, body, head or arms, for at least one full second before the ball is snapped.*
>
> *7.1.3.b.4 One player may be in motion, but not in motion toward his opponent's goal line. A lineman may not be in motion at the snap. Other players must be stationary in their positions without movement of the feet, head or arms.*

Insert 4-22 – Collegiate Rules Regarding Motion

Motion
(Left Pro, WR motions to Left Twins)

Shift
(Right Wing Pro-Split, shift to Left Pro - 3A)

Trade
(Right Pro-I, trade to Left Pro - I)
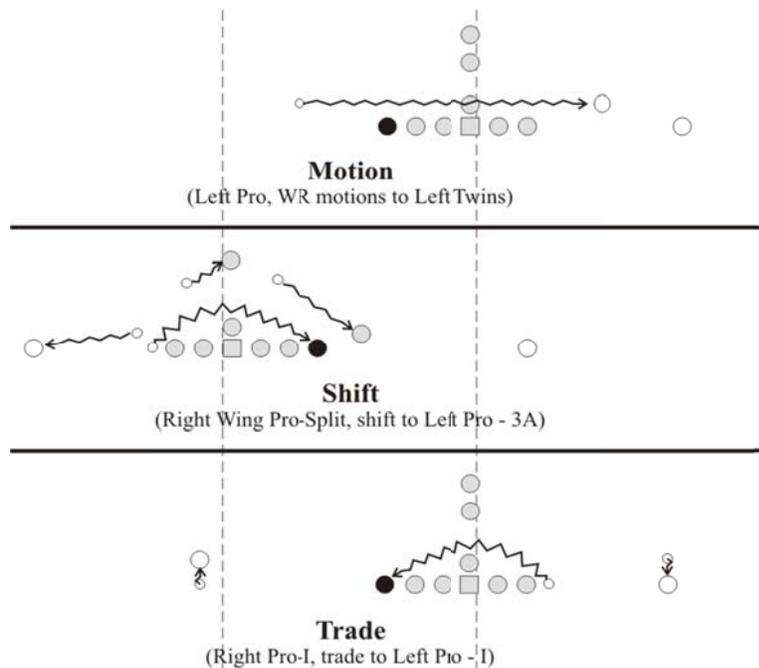
Figure 4-23 - Motion, Shift and Trades Examples

There are two main ways to define movement. The first method is to define and enter in separate fields the offense's initial alignment (pre-movement set, pre-movement strength, and pre-movement backfield) and then another set of fields to denote their location at the snap of the ball. The advantages are that it is easy to visualize their initial alignment. Also, reports can easily be generated based on the initial alignment. The disadvantages are that the entering of three additional fields is time-consuming and cumbersome. It is also difficult to put all of the information on a number of the report formats, and the exact motion (and even

sometimes the exact player) might not be able to be determined by comparing the fields.

The second method is to describe the movement in a code to which pre-movement alignment can be figured out. This is the method that will be described in detail below. The advantage of this system is that it can easily be associated with post-movement formation on almost every report format. The disadvantages of this system is that it is harder to visualize pre-movement alignment and it's very difficult to print reports describing pre-movement alignment based on this field only. In this book, motions, shifts and trades are all combined into one field, but separate fields can be used if desired.

It is possible to use either method or even both methods simultaneously based on what you want your reports to show. As with all fields in this book, it is important for you to determine what information you need to see on your reports. This will dictate what fields you will need to use.

(28) Movement

Attribute	
FIELD TYPE	Text
LENGTH	8

Each of the three possible types of movement—motion, shift and trade —will be described separately. [Note that it is possible to have multiple types of movement on the same play and this field is capable of denoting that.]

MOTION THAT DOES NOT START OR STOP IN THE BACKFIELD

As explained earlier, set, strength and backfield definitions describe the players' alignment at the time the ball is snapped. The motion coding system for any player not initially aligned in the backfield consists of three parts.

Different systems can be developed based on what information you want. I have worked with some teams that have developed a detailed system of identifying the horizontal location that is used to describe the motion man's path. I have also worked with other teams that have simply marked this field with a "M" to denote that the play had a player in motion. Who was in motion and where they motion to was not important to them in their reports.

The important part is to determine what you want to know and then develop a system to record this information in a concise and consistent manner.

(29) Audible/No-Huddle

Attribute	
FIELD TYPE	Text
LENGTH	1
VALUE LIMITS	A, N, C

Just as the field name applies, this field records if the quarterback visibly audibles at the line of scrimmage or if the offense is in a no-huddle situation. Place an "A" in this field if the QB audibles. If the offense is in no-huddle, place an "N" in this field. All no-huddle situations also imply an audible by the quarterback.

With some current collegiate and high school offenses, it makes sense to mark audibles in which the QB or even the entire team first looks to the sideline with a "C" for check with me. True QB-called audible plays versus play changes called from the sideline could be quite different and therefore should be studied separately.

Depending on the offensive system, a quarterback might have only a few audibles he is able to call. To know what those audibles are will give you a definite edge. For teams that check with the sideline, you might be able to determine patterns in their calls and make plans for it in your gameplan.

(30) Bunch Formation

Attribute	
FIELD TYPE	Text
LENGTH	1
VALUE LIMITS	B

This field is to record any bunch alignment of eligible receivers. The

purpose is to be able to study route concepts and tendencies for situations

which could require defensive adjustments, such as a Banjo call.

(31) Strong-Side Split / Weak-Side Split

Attribute (same for both fields)	
FIELD TYPE	Text
LENGTH	1
VALUE LIMITS	O, N, A, H, M

These two fields refer to the splits of the #1 strong receiver and the #1

weak receiver. Note that this could be any type of receiver—wide receiver,

tight end or running back. The purpose is to try and identify certain routes

tendencies based on widest receiver location. The codes are:

- O = "Outside" – between the numbers and the sideline
- N = "Numbers" – this is being aligned on the numbers
- A = "Alley" – this is the space halfway between the hash and the top of the numbers
- H = "Hash" – this is aligned within three yards of the hash.
- M = "Middle" – this is the space between the hashes

Chapter 5 - Play Data

The play data section fields give a complete description of the offensive play that was run.   The important part of these fields is to break the information in pieces that can be analyzed independently. This section could have as many as 23 different fields should you choose to use them all.

(32) Run/Pass/No Play

Attribute	
FIELD TYPE	Text
LENGTH	1
VALUE LIMITS	R,P,N

If it is a running play, enter an "R". If it is a passing play, enter a "P". If the play is stopped before the snap or immediately after the snap but before you could determine what the play was going it be, enter an "N" for No Play. If a play is run to its full conclusion, and then called back because of a penalty, enter "R" or "P" and then reflect the penalty and the penalty yards in the proper columns. The only reasons to use "N" is to identify plays that have no value in being scouted. For NFL teams that get GSIS, this run/pass field can be autocalculated by the pass result column

and another field ("no play" or "skip") would then need to denote that if

play has no value and should not be included in any reports.

(33) Play Type

Attribute	
FIELD TYPE	Text
LENGTH	1
VALUE LIMITS	Limited to the 17 values listed below

A play type is a way to group together similar plays for reporting

purposes. This field will be extremely useful in summary type reports as

well as player reports in being able to group the type of plays together.

I defined 17 different play types in this book, 10 different run types, six

different pass types and one for trick plays. You can define as many or as

few play type groups as desired.

Another way I have used the play type field in the past is by grouping

runs into just four groups, namely one-back inside runs, one-back outside

runs, two-back inside runs and two-back outside runs.

COUNTER
Counter plays involve 2 blockers coming from the backside. (Also includes the 1-step cutback play)

Cutback | Counter | Counter FB

DRAW
Draw plays involve letting the defenders come upfield, showing pass blocking, followed by a delay handoff to the RB.

Draw | Lead Draw | Split Lead Draw

FULLBACK
Fullback plays are any running plays where the fullback is the ball carrier

FB Belly | FB Dive | Wham FB

LEAD
Lead plays involve having a lead blocker. The lead blocker comes from the playside of the formation

TE Lead | ISO | Power

10 Run Play Types

1. "C"   Counter
2. "D"   Draw
3. "F"   FB Runs
4. "L"   Lead/Iso/Power
5. "O"   Option
6. "Q"   QB Runs
7. "R"   Trap
8. "T"   Toss or Sweep
9. "W"   Wham
10. "Z"   Zone

Figure 5-1 - Running Play Types

OPTION Option plays involve plays that can have more than 1 possible ballcarrier	Speed Option	Belly Option	Lead Option
QB QB plays involve having the QB as the only possible carrier (do not confuse with option)	QB Sneak	QB Draw	QB Sweep
TRAP Trap plays involve crossing blockers that block defensive linemen	TE Trap	FB Trap	Trap FB
TOSS Toss plays involve tossing the ball to the RB or handing with the idea of the RB going outside of offensive tackle.	Toss 1 bk	Toss	Toss Lead
WHAM Wham plays involve 1 blocker coming from the backside.	Wham 1bk	Wham	Wham FB
TRICK Trick plays involve deceiving the defense. A trick run is any play where the TB, FB, or QB is not the ball carrier.	Quick	Reverse	TE Reverse
ZONE Zone plays are any running plays that have primarily one-on-one blocking and no lead blocker.	Zone	Lead Stretch	Split Zone
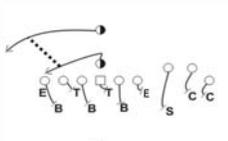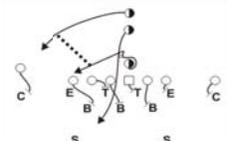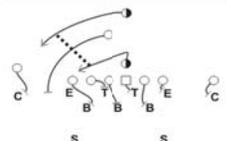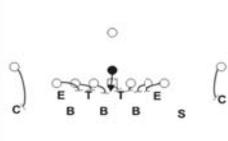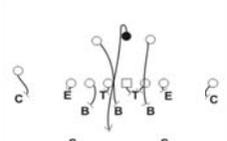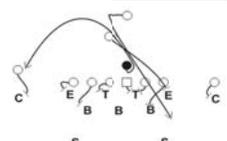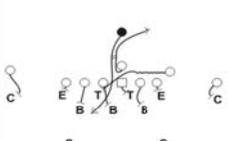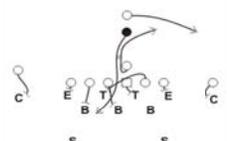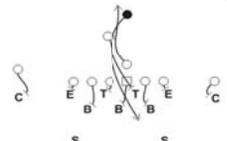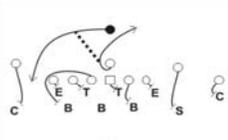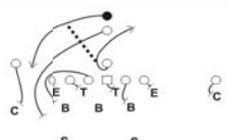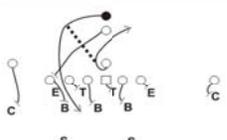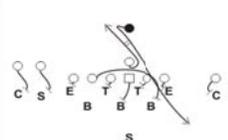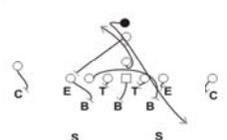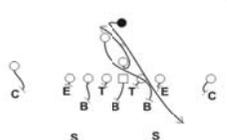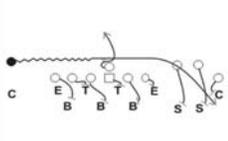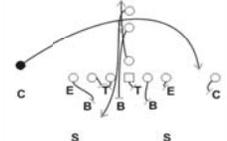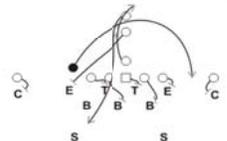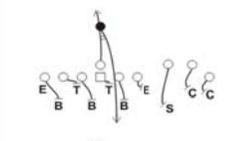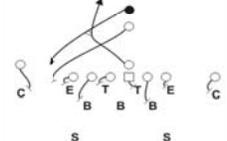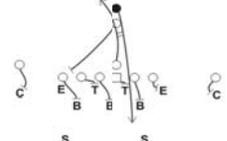
Figure 5-2 - Running Play Types Continued

1. "3"   Quick
2. "5"   Dropback
3. "6"   Sprint
4. "P"   Play-action
5. "S"   Screen
6. "B"   Boot, Waggle, PA Roll

QUICK
QB takes 3-steps and throws.

TRICK
Any pass not thrown by QB

DROPBACK
QB takes 5 or 7 steps and throws.

BOOT
Offense fakes a running play, then QB rolls opposite direction of all of the RBs located in the backfield.

SPRINT
QB "rolls out" (moves sideways) towards the sideline.

WAGGLE
Offense fakes a running play, then QB rolls in opposite direction of 2nd RB and in the same direction as the 1st RB.
** must have at least 2 RBs in backfield

PLAY ACTION
Offense fakes a running play in order to hold LB and slow down the pass rush

PLAY ACT. ROLL
Offense fakes a running play, then QB rolls in the same direction of all of the RBs located in the backfield.
** must have at least 2 RBs in backfield

SCREEN
QB throws to any eligible reciever behind the LOS. Offensive lineman may block downfield before the ball is passed.

Figure 5-3 - Passing Play Types

1. X - All Tricks plays (runs or passes), such as reverses or double passes
    - o   Trick Run - Any running play where the TB, FB or QB is not the ball carrier
    - o   Trick Pass - Any passing play where the ball is thrown by anyone but the QB

(34) Play Code

Attribute	
FIELD TYPE	Text
LENGTH	6

PLAY CODE DESIGNATION FOR RUNNING PLAYS

In this system, we described all run plays by a two digit number.

FIRST DIGIT FOR RUNS

The first digit describes the ball carrier's location. Use the same chart

as you used to define the backfield. If a WR or a RB in a WR location carries

the ball, use their letter designation as defined in formation group diagram.

SECOND DIGIT FOR RUNS

The second digit designates the hole the offensive play is designed to

attack. There are generally two ways to define hole hit values. The first

method is to designate hole hit values by direction. (i.e. All of the holes to

the right are even numbered and all of the holes to the left are odd

numbered.) While this information will always tell you if they ran the ball

to the right or left in the reports, it cannot by itself tell you if it was run to

the formation's strong or weak-side.

The second (and my preferred) method is to denote hole hit values by

formation strength. For example, all even numbered holes are always to

the formation strong-side and all odd numbered holes are to the weak-

side.   We can determine if the run was to the right or left by using a

calculated field called play direction that will be described later in the book.

0 = Middle of center to outside leg of center on the formation's strong-side
1 = Middle of center to outside leg of center on the formation's weak-side
2 = Outside leg of center to outside leg of guard on the formation's strong-side
3 = Outside leg of center to outside leg of guard on the formation's weak-side
4 = Outside leg of guard to outside leg of tackle on the formation's strong-side
5 = Outside leg of guard to outside leg of tackle on the formation's weak-side
6 = Outside leg of tackle to outside leg of tight end on the formation's strong-side
7 = Outside leg of tackle to outside leg of tight end on the formation's weak-side
8 = Outside the outside leg of tight end on the formation's strong-side
9 = Outside the outside leg of tight end on the formation's weak-side
    NOTE - if there is no TE, determine 6/8 hole or 7/9 hole as if the TE was there.
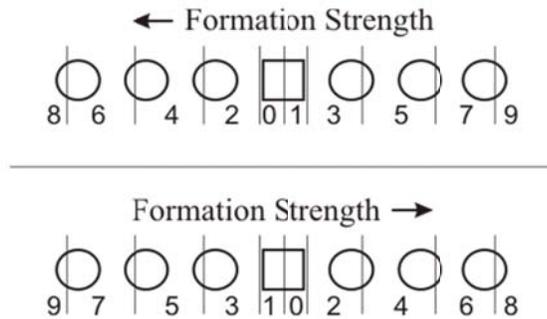
Figure 5-4 - Hole Hit Based on Formation Strength

Note that the definition states where the ball is *designed* to attack.

Some running plays are clearly designed to attack one certain hole, but

because of the defense, the ball carrier may cut the ball back or bounce it

outside. By recording the attempted location, you are denoting where they

will be trying to run it again if they run the same play against you.

PLAY CODE DESIGNATION FOR PASSING PLAYS

The play code values for passing plays are used to define the direction

and details of the pass protection scheme.

PLAY-ACTION PASSES

Play-action passes are defined similar to the running plays, except they

will start with the letter "P". The next digit denotes the back that was

faked to and then the last digit the number hole the fake was to (i.e. 34 is a

run of the 3 back to the 4 hole). P34 is a play-action pass fake of the 3 back

to the 4 hole.

SCREENS

Other passes that have a run play fake, such as play-action screens and

boots, are described the same way with a suffix ending to identify what

type of play. A play-action screen pass is labeled similar to the play-action

pass (a "P" followed by two numbers). However, a screen type suffix is

then added to note what type of screen is was (i.e. P34SWG is a run play

fake to the 3 back in the 4 hole followed by a WR swing/bubble screen).

If the screen is run without play-action, add "QK" for a three-step and

"DB" for a five to seven-step drop and then add the screen suffix (i.e. QK

SWG is a three-step WR swing/bubble screen).

SLIP

A slip screen is a WR screen where the receiver drops back off the LOS, catches the ball, and then follows behind the wall of blockers
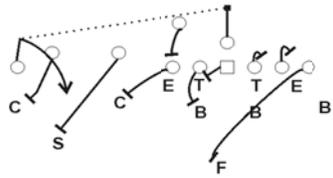
SWING

A swing screen is a WR screen where the receiver swings towards the sideline, catches the ball, then follows outside blocker
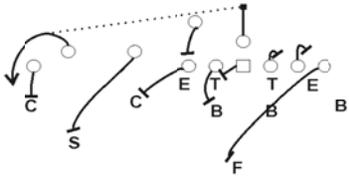
SCREEN

QB "rolls out" (moves sideways) towards the sideline.
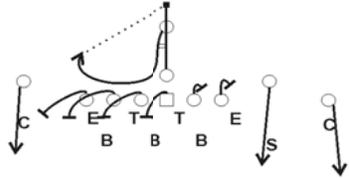
TEXAS

A flare screen by the RB. It is different from a normal flare route in that the RB has blockers downfield.
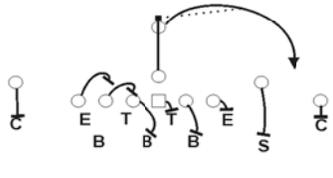
MIDDLE SCREEN

QB throws to any eligible reciever behind the LOS. Offensive lineman may block downfield before the ball is passed.
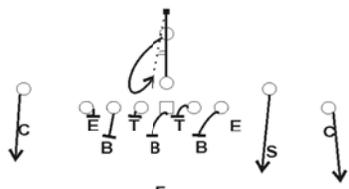
TE SCREEN

QB throws to any eligible reciever behind the LOS. Offensive lineman may block downfield before the ball is passed.
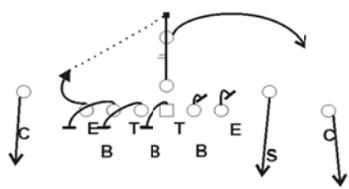
Figure 5-5 – Screen Examples

Boot passes are done the same way as play-action screen passes. Use the following boot type suffixes (i.e. P34BT):

Boot suffixes and descriptions

- Boot (BT) - Play-action with QB rolling opposite direction of all RBs

- Waggle (WG) - Play-action with backs split, QB rolls opposite direction of 2nd RB

- PA Roll (PA) - Play-action with QB rolling in same direction of RBs

QUICK, DROPBACK AND SPRINT PASSES

There are a number of methods you can use to describe pass protection schemes that don't involve a run play fake.

One method is to simply indicate "QK" for quick pass, "DB" for dropback pass, and "SPR" for sprint pass.

A second method is to use the offensive-type terminology. An example would be "2 Jet" or "3 Jet" protection. In this case, put the "2" or "3" in this field and place "Jet" in the next field (blocking scheme).

A third method is to develop a detailed code to identify the basic elements of the pass protection scheme. A system is described below. [Note – if you use all part of the following code, play code length needs to be expanded to 10 characters.]

LOCATION	DESCRIPTION	CODE
FIRST DIGIT	Number of steps the QB drops	3 = Quick pass 5 = 5/7 step drop 8 = Sprint strong 9 = Sprint weak
SECOND DIGIT	Number of blockers	Number from 5 to 0 ("0" means 10)
THRID DIGIT	Direction the center blocks	0 = drops straight back 1 = blocks weak 2 = block strong
FOUR DIGIT	Direction the backs block	0 = No back block 1 = all backs block weak 2 = all backs block strong 3 = backs split
"DASH"	"-"	Adds separate in code
ADD. LETTERS	Letters of add. Blockers	The position letters of any additional blockers

Table 5-6 - Defining Pass Protection Schemes

Code Examples

3711-YT (Quick pass with seven blockers (TE&TB), OC and TB block weak)

5520 (Dropback pass with five blockers, OC blocks strong)

8622-T (Sprint strong with six blockers (TB), OC and TB both block strong)

(35) Blocking Scheme

Attribute	
FIELD TYPE	Text
LENGTH	12

BLOCKING SCHEME DESIGNATION FOR RUNNING PLAYS

Enter the blocking scheme used by the offensive line (i.e. Wham or Ctr FB). For examples on my terminology, refer back to the running play type table. This list is far from complete however, and the decision of how to consistently name specific schemes will be one of the challenges you will face.

BLOCKING SCHEME DESIGNATION FOR PASSING PLAYS

The purpose of this field for pass plays is to group the pass protections together into large groups. You may decide that you do not need this grouping of pass protection scheme. If so, just leave this field blank for all pass plays.

PLAY-ACTION PASSES, INCLUDING PLAY-ACTION SCREENS AND BOOTS

Enter a general description of the protection. For example, "PA Lead Weak" would identify this play as a play-action pass using lead weak run action.

QUICK, DROPBACK AND SPRINT PASSES

If you decided to use method two in describing non-play-action pass protections in the play code field (using offensive terminology), simply enter the part of the scheme name that does not indicate direction, such as "Jet". If you used any other method, enter a generic name of the type of pass protection scheme. Examples could be "Slide Strong" or "Big on Big". This will assist in grouping pass protections together for further study.

(36) Blocking Adjustments

Attribute	
FIELD TYPE	Text
LENGTH	10

This field is to denote any blocking scheme variations, such as a fold block by the center and a pull block by the guard. We did not use this field often as we manually drew up every blocking variation, but some coaches might find this information useful. As with all of the data fields, you must remain constant in your naming practices so the same block adjustment does not appear as two different adjustments to the computer.

For self-scout purposes, any actual offensive line calls can be denoted here (such as "Tag" or "COG") to study if the right calls are being made and how effective each call is. This is also extremely useful later in making of training tapes.

(37) Pass Concepts (Passing plays only)

Attribute	
FIELD TYPE	Text
LENGTH	2
VALUE LIMITS	Limited to 12 concepts

Pass concepts is a way to group similar pass route philosophies. This field will enable you to look for trends in route patterns based on data fields, such as down, distance or formation, without getting overwhelmed with all of the route details and variations. The following is a system to group routes into 12 different groups although—as with all terminology in the book—you can create more or less to match your needs.

Four concepts deal with the type of pass and the formation.

QK / Quicks *All routes involving a 3 step QB drop*		
MV / Movement *Routes involving the QB moving out of the pocket, either by sprint or boot action*		
BN / Bunch *Route combinations originating from a bunched formation*		
HV / Heavy *All routes run out a heavy formation, such as short yardage or GL*		
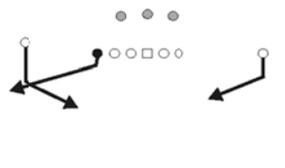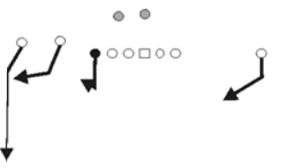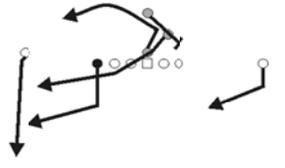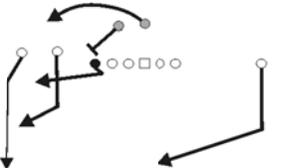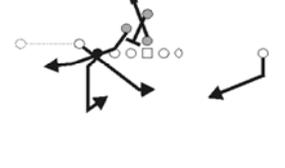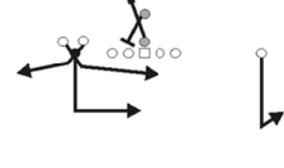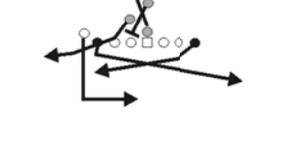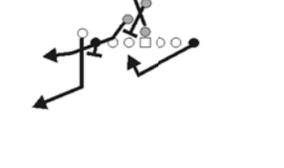
Figure 5-7 and 5-8 –Route Concepts

Eight concepts are for play-action and dropback route combinations.

HO / Hortizontals *Underneath routes designed to "high-low" an underneath defender*		
IN / Individuals *Underneath routes that do not intersect*		
DR / Drive *Routes involving 2 crossers (1 shallow) that start from the same side of the ball*		
LV / Levels *Routes involving 2 crossers (1 shallow) that start from opposite sides of the ball*		
IS / Inside Stack *Any route combinations located between the numbers with stacked routes (underneath with a deep one over it)*		
OS / Outside Stack *Any route combinations located outside the numbers with stacked routes (underneath with a deep one over it)*		
CR / Crosser *Route combinations involving at least 1 deep over route*		
VT / Vertical *Routes designed to attack deep areas of the field*		
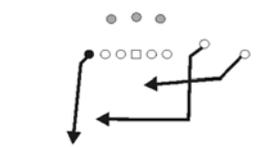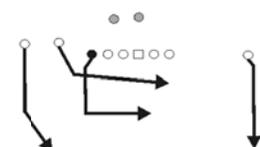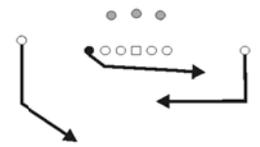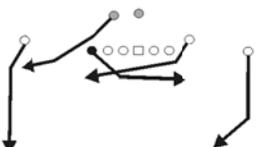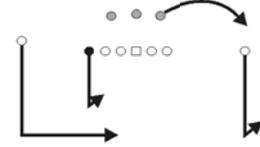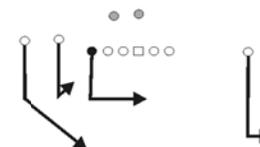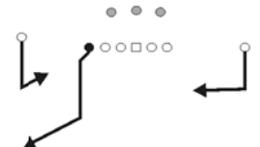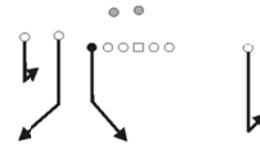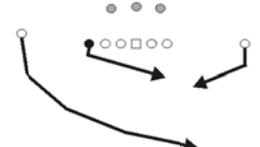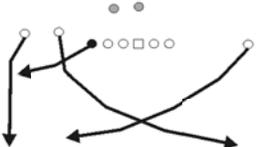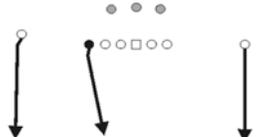
(38) Pass Description (Passing plays only)

Attribute	
FIELD TYPE	Text
LENGTH	25

This field is used to record the pass routes. There are typically four schools of thoughts.

- Option 1 - Record the receiver thrown to and their route (i.e. X-GO or Z-CORNER).

- Option 2 - Develop a numbered route tree and record all of the receivers in a numbered form. We recorded from the #1 strong receiver to the #1 weak receiver. If an eligible receiver is blocking, we put a dash in its spot. For example, "96--9" means #1 strong and #1 weak receivers ran go ("9") routes, #2 strong receiver ran a dig ("6") and the other two eligible receivers blocked.

- Option 3 – Use this field as a "merge" field. You would not record anything here, but use the five route fields described later to merge into one character string. The value would be similar to option two in which each of the receivers' routes are described, but would be more detailed.

- Option 4 - For self-scout purposes, enter the name of the pass plays (i.e. Ralph or Corners) as you would call the play in the huddle.

Again, what option you want to use will really depend on what you want to get out of this field in your reports.
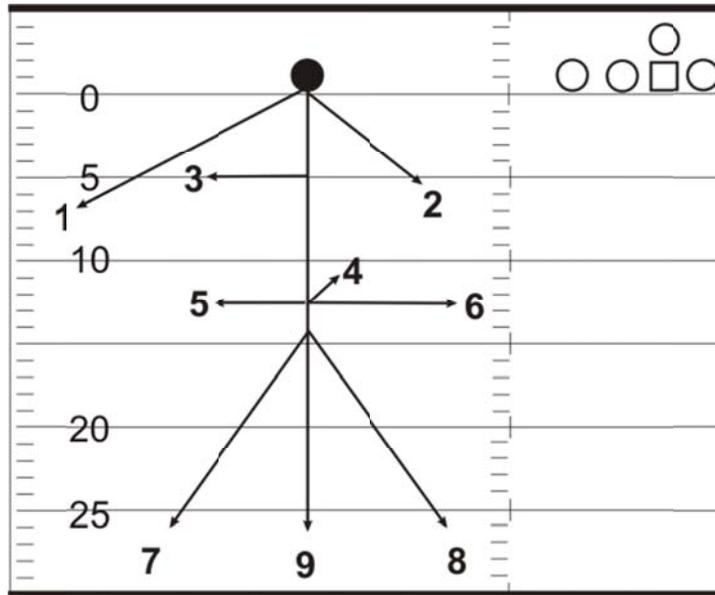
Figure 5-9 - Numbered Route Tree For Option 2

Detailed Pass Route Analysis

The next three fields (which are actually fifteen fields) would record the jersey number, position and routes of every eligible receiver for each pass play. By recording this information, you will be able to get an in-depth look at the entire pass system, including where specific players align in certain formations, what routes are run out of the different personal groups, what routes are run by the #1 strong receiver in certain situations, all the routes ran by a specific player, etc.

These fields are time-consuming to record but will provide you with a wealth of information. It is important to determine how valuable this information is to you before deciding on using these 15 fields or not.

(39) Receiver Jerseys

*** Note that there are actually five fields - #1 Str Jer, #2 Str Jer, #3 Jer, #2 Wk Jer, #1 Wk Jer ***

Attribute	
FIELD TYPE	Numeric
LENGTH	2

This is the jersey number of the receivers as they are aligned from #1 strong to #1 weak. (Refer back to formation group for receiver designations)

(40) Receiver Positions

*** Note that there are actually five fields - #1 Str Pos, #2 Str Pos, #3

Pos, #2 Wk Pos, #1 Wk Pos ***

Attribute	
FIELD TYPE	Text
LENGTH	1

This is the letter or number designation of the receivers as they are

aligned from #1 strong to #1 weak.

(41) Receiver Routes

*** Note that there are actually five fields - #1 Str Rte, #2 Str Rte, #3

Rte, #2 Wk Rte, #1 Wk Rte ***

Attribute	
FIELD TYPE	Text
LENGTH	4

This is the route code of the receivers as they are aligned from #1

strong to #1 weak. The routes are defined using a two letter code. The

reason we did not use the numbered route tree is because there are more

than 10 possible routes and it is easier to read and interpret the route's

abbreviation rather than using a two-digit code or a combination of

numbers and abbreviations.

The field is four characters wide in order to accommodate double moves, such as a post-corner, or a hitch and go. In these cases, combine the route codes together (i.e. post-corner is "ptcn" and hitch-and-go is "htgo").

CB - Comeback	DR - Drag	HT- Hitch	QO - Quick Out
CL - Curl	DO - Deep Out	IN - In	SL - Slant
CI - Circle	FD - Fade	OP - Option	SM - Seam
CN - Corner	FL - Flare	OT - Out	SP - Spot
CR - Cross	FT - Flat	PT - Post	WH - Wheel
DE - Delay	GO - Go		
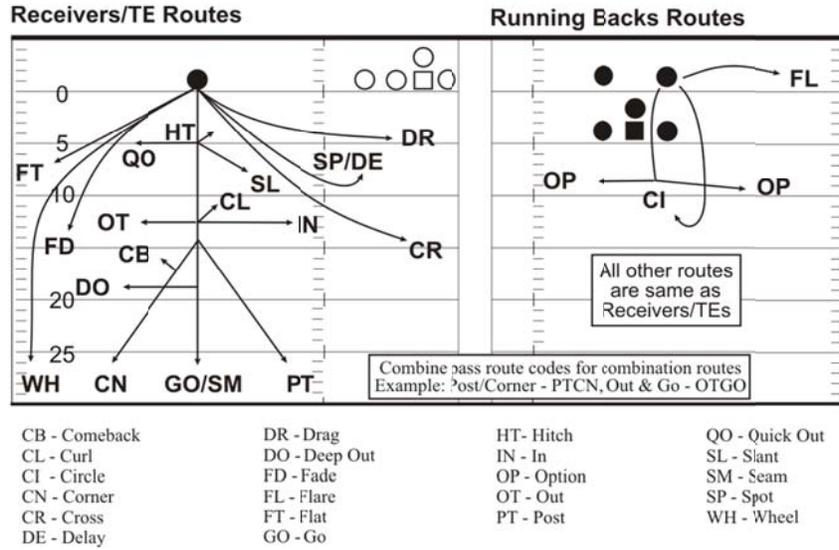
Figure 5-10 Pass Routes

(42) Offensive Play

Attribute	
FIELD TYPE	Text
LENGTH	40

This field is the merged values of fields to display the entire offensive play-call. For run plays, combine play code and blocking scheme values (add blocking adjustment if you use it). For pass plays, combine the fields used to denote protection with the fields used to denote pass route. You may decide to use route concept rather than pass description depending on how detailed you want the field value to be. This will allow reports to consider the entire offensive play in one field which is helpful for play list reports and text overlays on computer video systems.

FORMULA EXAMPLES	
RUN PLAYS	Play Code + Blocking Scheme + Blocking Adjustment
PASS PLAYS (using play code and blocking for pass protection and play description for route)	Play Code + Blocking + Pass Description
PASS PLAYS (using play code and blocking for pass protection and the five player routes)	Play Code + Blocking + Route #1S + Route #2S + Route #3 + Route #2W + Route #1W
PASS PLAYS (using play code and route concept)	Play Code + Route Concept

Table 5 11 – Formulas for Offensive Play

Chapter 6 - Play Outcome Data

This section deals with what happened specifically on a play. While play outcome is not always as important as what the opponent was attempting to run, these fields can reveal tendencies, specifically player tendencies based on play execution.

(43) Hole Hit (Running plays only)

Attribute	
FIELD TYPE	Text
FORMULA	****CALCULATED** – Last number of play code for run plays only
LENGTH	1

This is the second appearance of the hole hit value as the number was previously used as part of the play code. There are two options for this field. Option one is to use the same value as entered as the second digit of the play code value. If you use this method, the computer can automatically enter the value in this field, but you must be consistent in your play code value entries. Option two is to use the actual hole the ball was run through. The first option is generally preferable because that's where the offense will try to run the ball again if they call the same play. However, some coaches like to denote the exact location of where the ball

was run. If this is the case, enter the actual hole hit here and leave the

designed hole hit designation as the second digit of the play code value.

(44) Pass Result (Passing plays only)

Attribute	
FIELD TYPE	Text
LENGTH	1
VALUE LIMITS	C,I,D,P,S,R

There are five possible results for every pass play. They are "C" for a

completed pass, "I" for an incomplete pass, "P" for an intercepted pass (a

pick), "S" for a sack, and a "R" for a quarterback scramble. A sack is

anytime the QB is tackled for a loss and a scramble is anytime the QB has

no gain or gains yardage. [Note that there is a difference between a QB

scramble (a designed pass play) and a QB run (a designed running play).

Nothing should be entered in this field if it was a designed running play.]

For self-scout breakdowns, you can mark incomplete passes that were

catchable as "D" for dropped passes.

(45) Pass Zone (Passing plays only)

Attribute	
FIELD TYPE	Text
LENGTH	2

I recommend defining pass zones by formation strength rather than by direction for the same reasons I recommended hole hit to be defined by formation strength. You are able to determine tendencies without considering formation strength. You can define as many, or as few, zones as you feel are necessary to get a complete picture of the offense's intent. This example in this book is a standard five under, three deep pass zone look with three screen pass zones.

SS = Strong Screen, MS = Middle Screen, WS = Weak Screen
SF = Strong Flat, SC = Strong Curl, MH = Hook, WC = Weak Curl, WF = Weak Flat
SD = Deep Strong, MD = Deep Middle, WD = Deep Weak
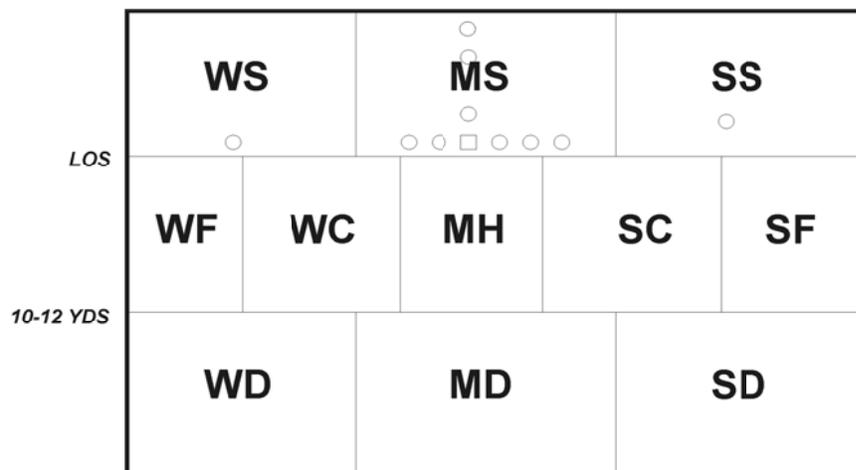
Figure 6-1 - Pass Zones

The five underneath zones start at the line of scrimmage and extend to a depth of about 10-12 yards. The width of the hook zone is from offensive tackle to offensive tackle. The width of the curl zones are from the hook zone to the width of the outside receiver. The width of the flat zones are from the outside receiver to the sideline.

The middle screen zone and the deep middle zones are defined by extending vertical lines from the tight end positions. The strong & weak screen zones and deep strong & weak zones is the area from these TE lines to the sidelines.

If the result of the pass play is a sack or a scramble, enter a "-" in pass zone. If the ball was thrown away to avoid a sack, enter an "X" in pass zone. By doing this, all pass plays will have an entry in this field, allowing you to quickly identify that all pass plays have been accounted for.

(46) QB Pressure (Passing plays only)

Attribute	
FIELD TYPE	Text
LENGTH	1
VALUE LIMITS	P,H,S

This field indicates if there was any pressure put on the QB. This is useful for watching the video of all QB pressures and analyze if there are common reasons for it (i.e. specific blocking scheme flaws or a poor pass blocking lineman) as well as to track the QB's reaction to being pressured. This is also an excellent field to use for self-scout offensive study purposes.

P = QB Pressure/Hurry

H = QB Hit

S = QB Sack

(47) Ball Carrier/Receiver

Attribute	
FIELD TYPE	Text
LENGTH	1

This is the letter or number designation of the ballcarrier.

(48) Jersey Number

Attribute	
FIELD TYPE	Numeric
LENGTH	2

This is the field of the jersey number of the ball carrier.

(49) Play Direction

Attribute	
FIELD TYPE	Text
FORMULA	**CALCULATED** – Based on hole hit, pass zone and formation strength
LENGTH	1
VALUE LIMITS	L,M,R

If you based hole hit values and pass zones values on formation strength as I recommended, you can use this field to determine any tendencies based on right or left. If the hole hit value is 4/6/8 or if the pass zone value is SS/SC/SF/SD (starts with "S"), the play direction value is equal to the formation strength value. If the hole hit value is 5/7/9 or if the pass zone value is WS/WC/WF/WD (starts with "W"), the play direction value is opposite of the formation strength value (i.e. if strength is right, the play direction is left or vice versa). If the hole hit value is 0/1/2/3 of if the pass zone value is MS/MH/MD/X/-, the play direction value is automatically "M" for middle.

This formula can be adjusted if hole hits were decided by direction

rather than formation strength by combining formation strength in the

formula.

(50) Action

Attribute	
FIELD TYPE	Numeric
LENGTH	5
VALUE LIMITS	Flow, Flood, Split, Empty

Action is used to describe the movement of players during the play. If

four or more players are on the strong-side of the formation—either at the

snap or by their movement during the play—the action is "flow". If three

or more players are on the weak-side of the formation—either at the snap

or by their movement—the action is "flood". If it remains three on the

strong-side and two on the weak-side, it is "split". If they align in an empty

set, the value is "empty". The purpose of the field is to determine any

pattern to the areas of the field the offensive play-caller likes to attack in

certain situations.

FLOW
4 or more players
on the strong side
of the formation

2 Back Run example

1 Back Run example

Pass example

FLOOD
3 or more players
on the weak side
of the formation

2 Back Run example

1 Back Run example

Pass example

SPLIT
3 players on the
strong side with the
other 2 on the weak
side of the formation

2 Back Run example

1 Back Run example

Pass example

EMPTY - Any play which start with no one besides in the QB in the backfield.

Figure 6-2 – Action Examples

(51) Gain/Loss

Attribute	
FIELD TYPE	Numeric
LENGTH	3

This is the numerical value of the play's yardage gained or lost. If there is lost yardage on the play, use a negative number. If you are using the penalty yard field, record the gain of the play as if there was no penalty. For example, a run gains six yards but there is an illegal shift penalty. Put "6" in the gain field and put "-5" in penalty yards.

(52) Penalty

Attribute	
FIELD TYPE	Text
LENGTH	6

This is a two digit code to denote the type of penalty on the play. It's suggested to be as consistent as possible, but strict adherence to coding is not as critical as other fields since this field is more for record-keeping rather than scouting purposes. Below is a sample of possible codes that can be used.

OF - Offsides   IM - Illegal Motion   HD – Holding

FM - Facemask   PF - Personal Foul

A suggestion for this field is to add a "O" in front of every offensive penalty and a "D" in front of every defensive penalty to be able to easily sort and report over the results. In this case, it would be "OIM" for an offensive illegal motion penalty or "DFM" for defensive facemask penalty.

I also recommend recording the penalty even if it is declined as it will more accurately reflect what happened on the field.

(53) Penalty Yards

Attribute	
FIELD TYPE	Numeric
LENGTH	3

This is the numeric value of any penalty yardage gained or lost. If there

is lost yardage on the play, record it as a negative number.

(54) Penalty Jersey

Attribute	
FIELD TYPE	Numeric
LENGTH	2

This field is for the jersey number of the player who committed the

penalty. The main reason for this field is for self-scouting purposes to track

the players who commit penalties and the type of penalties they most

often commit.

(55) Win/Loss

Attribute	
FIELD TYPE	Text
FORMULA	***CALCULATED** – Based on distance and gain
LENGTH	1
VALUE LIMITS	W,L

This field is to track whether the offensive play was a successful play or

not. The most common formula for NFL teams is based on yards gained in

relation to distance needed for a 1st down. Here is a list of that formula's

criteria:

- On 1st and 10, a result that gains four or more yards is considered a

  win for the offense.

- On any other 1st down situation and on all 2nd down plays, a result

  that gains at least half the distance needed for a 1st down is

  considered a win for the offense.

- On any 3rd or 4th down play, a result that gains at least a 1st down is

  considered a win for the offense.

While there might be some reason you want to see what plays are

successful while doing an opponent scout, the main reason for this field is

self-scout analysis.

Other definitions of a successful play can be used, such as yards gained

per play. There are a number of possible variations, such as any run that

gains four or more yards or pass that gains six or more yards regardless of

the down and distance, etc.

Some teams prefer to manually enter the value of this field to reflect

plays that might not reflect the formula, but are desired plays. For

example, a gain of 12 on a 3rd and 15 play could be a "win" if it placed the

offense in FG range. Using the automatic formula, this play would be a

"loss."

(56) Series End

Attribute	
FIELD TYPE	Text
LENGTH	2
VALE LIMITS	FG, TD, PT, SF, FM, IN, HF, GM, DN

The series end field is used to note when the offense scores, loses the

ball due to a turnover or safety, or to signify the end of the first half or

game, etc.

Use one of the following two letter abbreviations to indicate how the

series ended. Note that a series end due to a punt or field goal will actually

appear on the 3rd down offensive play line prior to the actual special teams

play as the special teams play is not considered an offensive play. The nine

possible values for series end are:

FG - FG Attempt (made or missed)   TD – Touchdown

PT – Punt   SF – Safety

FM – Fumble   IN – Interception

HF – Halftime   GM – Game

DN – Downs

Chapter 7 - Defensive Data

The last section consists of data fields that describe what defense the opponent offense was facing in the games you are scouting. This will allow you to identify plays run against similar defenses to yours as well as eliminate plays versus defensive schemes you do not run. For example, if you play a lot of press man coverage, you will want to see what they do versus press. Did they throw a lot of slants or fades? What route concepts did they like? The same goes for fronts, stunts and pressures.

Knowing how they wanted to attack certain defenses will give you an understanding of what their gameplan might be on game day. For all of these fields, I recommend using as much of your terminology as you can.

These fields are also very important for self-scout purposes as it is important to know what different defensive schemes are being played. It is also good to see your success and failure rates versus different defensive calls.

(57) Defensive Personnel

Attribute	
FIELD TYPE	Text
LENGTH	6

Record what type of defensive players were on the field. Examples could be Base (REG), Nickel (NK), Dime (DM), or Goal Line (GL). These groups are generally based on the number of DBs on the field. Another method is to use a two digit number with the first number denoting the number of defensive linemen and the second digit referring to the number of linebackers. ("43" means 4 DLs, 3 LBs and therefore 4 DBs)

DL-LB-DB	2011 NFL Avg	Def Pers	Total Pct
6-4-1	0.2%	GL	0.4%
5-4-2	0.1%		
6-3-2	0.1%		
3-5-3	0.2%	BIG	2.0%
4-4-3	0.8%		
5-3-3	0.8%		
6-2-3	0.2%		
3-4-4	15.8%	REG	45.0%
4-3-4	28.8%		
5-2-4	0.4%		
1-5-5	0.1%	NKL	39.6%
2-4-5	10.2%		
3-3-5	8.7%		
4-2-5	20.5%		
5-1-5	0.1%		
1-4-6	0.7%	DM	11.8%
2-3-6	5.0%		
3-2-6	3.1%		
4-1-6	3.0%		
0-4-7	0.0%	QTR	0.7%
1-3-7	0.6%		
2-2-7	0.1%		
1-2-8	0.0%	DOL	0.0%

Table 7-1 Defensive Personnal

(58) Front

Attribute	
FIELD TYPE	Text
LENGTH	10

Unlike offensive formations with its rules regarding players on the line of scrimmage and eligible receiver, defensive alignment are quite varied. Use this field to record the defensive front alignment.

In this book, I recommend a two-digit numerical coding system based on defensive alignment with adjustment words to denote variations. The first digit refers to the front alignment over the offensive center and guards and the second digit refers to the alignment of the linebackers. Additional tag words further define the exact alignment of the defenders.

1ST DIGIT	FRONT FAMILY	ALIGNMENT
20	UNDER	Center and weakside covered, strongside guard uncovered
30	ODD (3DL)	Center covered, both guard uncovered 3 or less defensive linemen in game
40	EVEN	Both guards covered, center uncovered
50	OVER	Center and strongside covered, weakside guard uncovered
60	ODD (4DL)	Center covered, both guard uncovered 4 DL in game – extra End strong
70	ODD (4DL)	Center covered, both guard uncovered 4 DL in game – extra End weak
80	BEAR	Center and both guard covered. Extra DE (4-3) on strong side or 3-4 personnel
90	BEAR	Center and both guard covered Extra DE (4-3) on weak side

Table 7-2 First digit of front definitions

2ND DIGIT	LINEBACKER ALIGNMENT
3	Both Sam and Will on LOS
5	Sam in LOS, Will off LOS
7	Sam off LOS, Will on LOS
9	Both Sam and Will off LOS

Table 7-3 Second digit of front definitions

Below is a list of some of the variation words. A number of them are used in the sample diagrams on the following pages.

1. WIDE – DE moves from 5 tech to a 6 or 7 tech (moves from OT to TE)
2. SHIP/WHIP – S in HIP or W in HIP. Hip refers to LB outside DE and off LOS
3. MUP/SUP/WUP/JUP – Linebacker walked up into gap
4. SFACE/WFACE – S or W aligns head up on TE with DE moving outside LB
5. SALK/WALK – S or W is walked out over a slot receiver
6. BOS – LBers shifted to strong side from their normal alignment.
7. BOW – LBers shifted to weak side from their normal alignment.
8. WEAK – DT(s) shifted weak
9. STRONG – DT(s) shifted strong
10. TITE – DT(s) shifted in tight (both in 1 technique)
11. JOKER – Strong safety moves down to LB alignment
12. FIST – Free safety moves down to LB alignment

If there is other personnel on the field other than regular (43 or 34), I

suggest putting a two letter code denoting the personnel on the field in

front of the two digit code. (i.e. NK 57 is a 57 front with a DB in place of the

Will linebacker).

UNDER FRONTS (Strongside guard uncovered)

23	23 MUP (M up in gap)
M W E T T E S ◐ ◐ ▣ ○ ◐ ○ ○	W E T T M E S ◐ ◐ ▣ ○ ◐ ○ ○
23 FIST (FS down) FS M W E T T E S ◐ ◐ ▣ ○ ◐ ○ ○	

25	25 BOS (LB shift strong)
W M E T T E S ◐ ◐ ▣ ○ ◐ ○ ○	W M E T T E S ◐ ◐ ▣ ○ ◐ ○ ○
25 JOKER (SS down) W M SS E T T E S ◐ ◐ ▣ ○ ◐ ○ ○	**25 WALK** (W outside on slot) W M E T T E S ○ ◐ ◐ ▣ ○ ◐ ○ ○

29	29 BOS (LB shifted strong)
W M S E T T E ◐ ◐ ▣ ○ ◐ ○ ○	W M S E T T E ◐ ◐ ▣ ○ ◐ ○ ○
29 SALK WALK W M S E T T E ○ ◐ ◐ ▣ ○ ◐ ○ ○	

Figure 7-4 Under front examples

EVEN FRONTS (Center uncovered)

43	43 JOKER (SS down)

43

M

W E   T   T E   S

43 JOKER (SS down)

M   SS

W E   T   T E   S

43 WEAK (Both T's shifted weak)

M

W E T   T E   S

43 TITE (Both T's in 1 tech)

M

W E T   T   E S

45

W   M

E   T   T E S

45 BOS SFACE (S on TE, LB Str)

W   M

E   T   T   S E

47

M   S

W E T   T   E

47 BOW (LB shifted weak)

M   S

W E   T   T   E

49

W   M   S

E   T   T   E

49 SHIP (S outside & off LOS)

W   M   S

E   T   T   E

49 MUP (Mike in up position)

W   S

E   T M T   E

49 BOW (LB shifted weak)

W   M   S

E   T   T   E

Figure 7-5 Even front examples

OVER FRONTS (Backside guard uncovered)

53	53 SFACE (S on TE, E outside)
M W E T T E S	M W E T T S E
53 JOKER (SS down)	53 TITE (Strong side T in 1 tech)
M SS W E T T E S	M W E T T E S
55	55 JOKER (SS down)
W M E T T E S	W M SS E T T E S
57	57 MUP SUP
M S W E T T E	W E M T T S E
59	59 SHIP (S outside E, off LOS)
W M S E T T E	W M S E T T E
59 WALK (Will outside on slot)	59 SALK WALK
M S W E T T E	M W S E T T E

Figure 7-6 Over front definitions

(3 DL)   ODD FRONTS   (4 DL)

33 STRONG (N shaded strong)

```
        J        M
   W  E     N   E  S
   ◑ ○  ▣ ○ ◑ ○
        ○
```

67 STRONG BOW

```
        M      S
   W  E     N   T   E
   ◑ ○  ▣ ○ ◑ ○
        ○
```

Code based on # of DL
30's – 3 DL
60's – 4 DL with extra E strong
70's – 4 DL with extra E weak

75 STRONG BOS

```
        W        M
   E  T      N    E  S
   ◑ ○  ▣ ○ ◑ ○
        ○
```

35 BOS (LB shifted strong)

```
     W     J      M
     E      N     E    S
   ◑ ○  ▥ ○ ◑ ○
        ○
```

63 BOS (LB shifted strong)

```
     W     M     S
     E      N     T    E
   ◑ ○  ▥ ○ ◑ ○
        ○
```

37

```
        J     M      S
   W  E     N     E
   ○ ○  ▥ ○ ◐ ○
        ○
```

73

```
        W     M      S
   E  T     N     E
   ○ ○  ▥ ○ ◐ ○
        ○
```

39 WEAK (Nose shaded weak)

```
   W     J     M    S
     E     N     E
   ◐ ○  ▣ ○ ◑ ○
        ○
```

69 WEAK (Nose shaded weak)

```
     W      M    S
     E     N    T   E
   ◑ ○  ▣ ○ ◑ ○
        ○
```

3-3

```
     W     M     S
     E     N     E
   ◑ ○  ▥ ○ ◑
        ○
```

For 3 DL / 3 LB fronts,
place a hyphen between the
numbers to denote.

Figure 7-7 Odd front definitions

BEAR FRONTS (All 3 covered)

83

```
                M
    W   E   T   T   E   S
    ◑   ◑   ⊞   ◑   ◑   ○
            ○
```

83 EXCH

```
                M
    W   E   T   T       S   E
    ◑   ◑   ⊞   ◑   ○       ◐
            ○
```

83 JOKER

```
          M     SS
    W   E   T   T   E   S
    ◐   ◑   ⊞   ◑   ◑   ○
            ○
```

83 JOKER EXCH

```
          M     SS
    W   E   T   T       S   E
    ◑   ◑   ◑   ◑   ○       ◐
            ○
```

83 FIST

```
        FS      M
    W   E   T   T   E   S
    ◑   ◑   ⊞   ◑   ◑   ○
            ○
```

87

```
            M       S
    W   E   T   T       E
    ◑   ◑   ⊞   ◑   ○       ◐
            ○
```

93 (3-4 Def Pers)

```
          J       M
    W   E   N   E       S
    ◑   ◑   ⊞   ◐   ○   ◐
            ○
```

95 (4-3 Def Pers)

```
          W       M
      E   T   T   E       S
      ◑   ◑   ⊞   ◐   ○   ◐
              ○
```

93 STR JOKER MFACE (3-4)

```
          J       SS
    W   E   N   E       M   S
    ◑   ◑   ◼   ◐   ○   ◐
            ○
```

95 STR JOKER MFACE (4-3)

```
          W       SS
      E   T   T   E       M   S
      ◑   ◑   ◼   ◐   ○   ◐
              ○
```

93 DBL STR JOKER JAM

```
          J       M
    W   E   N   E   SS  S
    ◑   ◑   ◼   ◐   ○   ◐
            ○
```

95 DBL STR JOKER JAM (4-3)

```
          W       M
      E   T   T   E   SS  S
      ◑   ◑   ◼   ◐   ○   ◐
              ○
```

Figure 7-8 Bear front definitions

(59) Deployment/Front Adjustment

Attribute	
FIELD TYPE	Text
LENGTH	10

As mentioned before, this field is used to record the specific defensive adjustments to a particular formation, such as "up", "face" or "hip". This could show certain tendencies versus specific defensive alignments while allowing the front field to serve a major grouping field.

(60) Attack Point (Running plays only)

Attribute	
FIELD TYPE	Text
LENGTH	3

Most offensive coaches like to run certain running plays versus certain defensive alignments. Defensive line technique is a field to record the alignment of every down lineman to the side of the offensive center that the ball is being run toward. This number will be either a two or three-digit number based on the number of down linemen.

The "standard" defensive line techniques (as standard as anything in football terminology is) are

0 - head up on the center
S - "shaded" outside shoulder of the center
1 - inside shoulder of guard

2 - head up on the guard
3 - outside shoulder of guard
i - "4I" inside shoulder of tackle
4 - head up on tackle
5 - outside shoulder of tackle
7 - inside shoulder of tight end
6 - head up on tight end
9 - outside shoulder of tight end
8 - extremely wide alignment

The key to remembering these codes is that even numbers are head up

(0 on center/2 on guard/4 on tackle/6 on tight end) while 1 and 3 are on

the guard, i and 5 on the tackle, and 7 and 9 on the tight end.

For example, a run to the weak-side of an under front would be "35" (a

3 technique and a 5 technique) while a run to the strong-side of an under

front would be "S59" (a shaded nose, a 5 technique and a 9 technique).
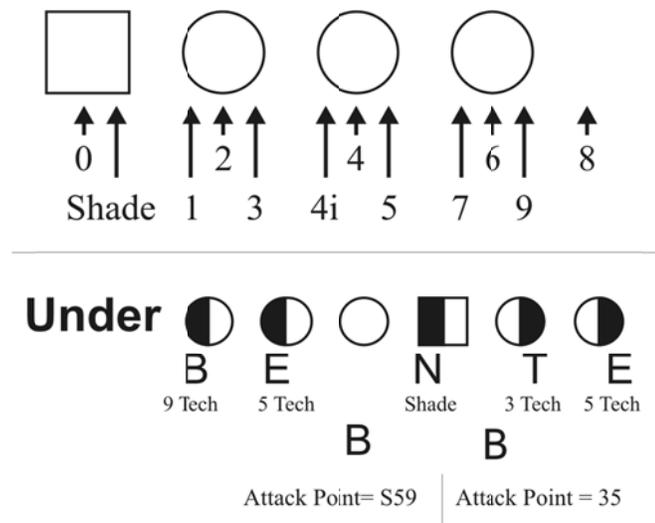
Figure 7 – 9 – Attack Point

(61) Stunt

Attribute	
FIELD TYPE	Text
LENGTH	10

This field is to record variations of defensive linemen movement that are not a straight rush. It could be used to denote one-player stunts (such as a pirate), two or more player stunts ("TT", "TE", etc), and/or any defensive lineman that drops into coverage (DE spy or zone drop).

STUNT EXAMPLES

Figure 7 – 10 – Stunt Examples

(62) Pressure Type

Attribute	
FIELD TYPE	Text
LENGTH	6

Just as it is with other fields, it is important to group similar defensive pressures. We used the pressure type field in a variety of methods, from just marking a "B" for any pressure to using the table below to denote the number of rushers, the coverage type and the direction of the pressure. It is important to figure out what you want to get out of this field before defining it.

COVERAGE	RUSHERS	DASH	DIRECTION
"**ZN**" = Zone Coverage "**ZB**" = Zone with dropping DL "**MN**" = Man Coverage	Number of total rushers	"Dash"	"W" = all extra rushers from weak-side of formation "S" = all extra rushers from strong-side of formation "O" = all extra rushers from the outside (both strong and weak) "I" = all extra rushers attacking the inside gaps (A gap) "C" = combination of the four groups listed above.

Table 7-10 - Pressure Type Examples

ZN5-I (Zone cover, 5 rush, inside)   **Z4-S** (Zone cover, 4 rush, strongside)

W   M   E   T   T   E   S

J   M   W   E   N   E   S

ZB5-W (Zone cover, 5 rush, weakside)   **ZB5-C** (Zone cover, 5 rush, combo)

W   M   E   T   T   E   S

M   S   W   E   T   T   E

MN6-S (Man cover, 6 man, strongside)   **MN5-S** (Man cover, 5 man, weakside)

J   M   W   E   N   E   S

J   M   W   E   N   E   S
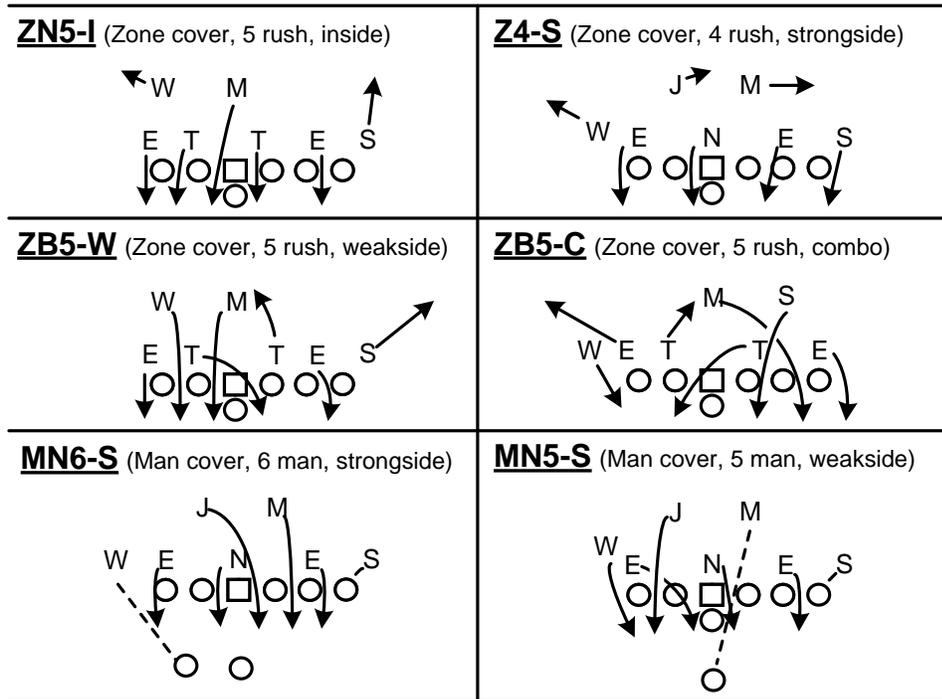
Figure 7-11 - Pressure Type Examples

(63) Pressure

Attribute	
FIELD TYPE	Text
LENGTH	10

This field is to denote the specific pressure. Option one is to use your defensive terminology as much as possible to define the pressure. Option two is to record who exactly is blitzing and through what gap they are rushing. For option two, we used letters to denote strong-side gaps (A,B,C,D) and use a number equivalent for weak-side gaps (1,2,3,4 where

A=1, etc). For example, MA/W1 means Mike in strong-side A gap and Will

is weak-side A gap. A value of $D/W3 would mean strong safety in strong-

side D gap and Will in weak-side C gap, and so forth.

4   3   2   1   A   B   C   D
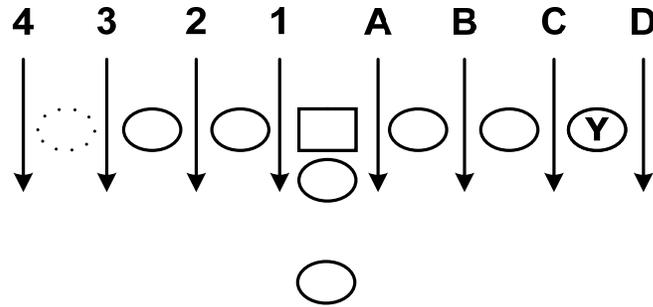
Figure 7-12 - Pressure Gap Locations

(64) Coverage Group

Attribute	
FIELD TYPE	Text
LENGTH	3
VALUE LIMITS	2,3,4,ZB2,ZB3,MC,MP

This field is to record the major coverage groups. The purpose is to get

an idea of route concepts and routes ran versus certain coverage schemes

without dealing with all of the varieties. For example, you can see all of the

route concepts versus "cover 2" without having to deal with 2 cloud, 2

bump, 2 sky, etc.

COVERAGE GROUP	CODE	DEFINITION
Zone - Cover 2	2	Any 2 deep coverage (2 cloud, 2 sky, etc)
Zone - Cover 3	3	Any 3 deep coverage (3, 3 roll, qtr/qtr/half)
Zone - Cover 4	4	Any 4 deep coverage
Zone Blz – Cov 2	ZB2	Any 2 deep coverage with DL dropping and extra rushers
Zone Blz – Cov 3	ZB3	Any 3 deep coverage with DL dropping and extra rushers
Man Coverage	MC	Man coverage with no extra rushers
Man Pressure	MP	Man coverage with extra rushers

Table 7-12 - Seven Coverage Groups

(65) Coverage

Attribute	
FIELD TYPE	Text
LENGTH	10

Just like the pressure field, this field gives you the option to denote the specific coverage the opponent faced. It is highly recommended to use your own terminology in defining the coverage.

(66) Defense

Attribute	
FIELD TYPE	Text
FORMULA	**MERGE** – Combination of Front, Stunt, Pressure and Coverage
LENGTH	23

This field is the merged values of the defense call (Front + Stunt + Pressure + Coverage) to combine the total call into one field.

SECTION 3 – DATA ANALYSIS

Chapter 8 – Self-Scout Analysis

Self-scout analysis should be completed as close to the opponent

analysis methods suggested in this book as possible. This will allow you to

evaluate yourself as an opposing coach would.

I would suggest using your own terminology whenever possible, but try

not to combine or eliminate fields if possible. For example, your huddle

call might be "Ace Right, Zone Right". In this case, the fields would be

- Set = "Ace"
- Strength = "L"
- TE Location = "R"
- Backfield = "3" (back is in home position)
- Play Type = "Z"
- Play code = "34"
- Blocking Scheme = "Zone"

I recommend setting aside time every week for self-scout. This will

enable you to run a last 4-6 game scout every week if desired. This is the

number of games most teams will break down when scouting you. A

running self-scout will also enable you to run a year-end self-scout

immediately after your last game or in additional preparation time you

might have before the playoffs or bowl game.

Chapter 9 – Game Analysis Reports

Few computer software programs have the flexibility Sagio does so a number of reports I could recommend are impossible to reproduce. In addition, every staff is different enough that all the report variations would just be overwhelming. Instead, I will discuss what your thought process should be in the area of reports.

Do not limit yourself. You should consider a wide range of reports to answer various questions. Areas for which reports should be produce include

- **WEEKLY COACHES SCOUTING REPORT** – reports designed to show opponent tendencies, strengths and weaknesses. The reports will range from overviews of their entire system to very specific detailed reports to look at a specific situation, such as goal line scheme.

- **GAMEPLAN REPORTS** – reports specifically design to assist in the formation of your gameplan. It focuses specifically on the items you will be identifying during a game to make your defensive calls.

- **WEEKLY PLAYERS SCOUTING REPORT** – reports to give to the players. Usually more summary in design with the purpose to communicate vital information and keys for their use.

- **GAMEDAY REPORTS** – reports designed to denote tendencies and trends in a gameday format that will allow coaches to track how close or how far the opponent is from the tendencies previously tracked.

- **IN-SEASON SELF-SCOUT REPORTS** – weekly reports to identify your own offensive trends and tendencies, generally using the last four games.

- **END-OF-SEASON SELF-SCOUT REPORTS** – reports designed to evaluate your offense play over the entire season. The purpose of these reports is to evaluate yourself during the off-season and make adjustments for the next season.

Also, for each of the six areas listed above, you should first start with reports that are summaries. This is the base upon which you can then dig deeper into details and meaning. You can then supplement these summary reports with more detailed reports. You generally will start with reports based on situation data, then start adding additional data from the other

chapters as they appear in the book, namely formation data, play data, play outcome data, and then finally defensive data analysis.

Next, go back to the first question you must answer in the "Game Analysis System." ***What information do I need to record***? Look at the data you are recording and make sure you are taking advantage of it all. If you are not taking advantage of some of the information being recorded, you should either develop more reports to use this data or stop recording it.

The purpose of this system is not only to be detailed in your analysis, but to also be efficient. In order to be efficient, you must constantly analyze your work and what you are accomplishing with it.

Lastly, you must realize that the same information can be displayed in dozens of different ways. A certain report format might be great for you to understand and comprehend the information quickly, but that same report might look like gibberish to another coach. I group reports into eight major different types of report layouts. Anyone of the eight format styles or a combination of formats could be used to answer any question. Each style is described along with some samples to get an idea of how information can be presented.

Report Format #1 - Play list

This report format is a straight listing of the play data in column form. Each line is a play with its associated data. Some computer programs have the ability to set color categories. An example might include color-coded personnel groups so patterns of offensive substitutions in a game can be seen.

Sample question these reports would answer
- *Can you show me the play information in game order, making each personnel a different color?*

Report: Game Play by Play
           ALL #01 Georgia

Page 1   Sat 4-Mar-06 7:13 AM

Florida Offense vs

1. Georgia   29-Oct-2005
2. Vanderbilt   5-Nov-2005
3. USC   12-Nov-2005

Opp	Play #	Quarter Series	D/Dst	Field Pos	Hash	OL T/S' Red Zone	Rec Ball	Personnel	Formation	Strength	Back Field	Motion	R/P/N	Run Play	Pass Play	Play Type	Hole	Pass Zone	Pass Rec	Car/Rcv	Jers #	Gain	Set/End
GEO	1	1 1	1/10	-20	M			20	INV 3W SPD GN	R	SP	Z-3	R	56 STR OPT (GIVE)		O	6			5	21	+7	
GEO	2	1 1	2/3	-27	R			11	BANDIT GN	R	A4	Z-2AP	P		P50 47/39	S		DI	I	Y	84	+0	
GEO	3	1 1	3/3	-27	R			10	DBLS INV GN	L	A5	4-5	P		P50 93FL7DR	S		WC	C	A	81	+5	
GEO	4	1 1	1/10	-32	R			21	UNB21	L	36	X-1AP	R	34 DBL LEAD		L	4			3	21	+12	
GEO	5	1 1	1/10	-44	R			20	INV 3W GN	L	56	4-5	R	55 CTR FB		C	5			5	21	+4	
GEO	6	1 1	3/6	-48	R			11	SL TRYPS NR GN	L	A4	S-3AP	P		P45BT 71110R	B		SC	I	Y	84	+0	
GEO	7	1 1	3/6	-48	R			20	INV 3W GN	R	46		P		P50 DR69-5	S		WC	C	X	81	+12	
GEO	8	1 1	1/10	+40	R			10	SL TRIO GN	L	A5	U-1AP	R	56 STR		Z	6			5	2	+2	
GEO	9	1 1	2/8	+38	L			20	INV 3W GN	R	47	5-4	P		P50 93FL16	S		S1	C	4	2	+3	
GEO	10	1 1	3/5	+35	R			10	DBLS INV GN	L	A5	4-5	P		P50 93FL7HI	S		WS	C	5	21	+8	
GEO	11	1 1	1/10	+27	R			21	WG PRO NEAR	L	36	6-6	P		P35WAG 7-1-CR	B		DI	I	Z	6	+0	
GEO	12	1 1	1/10	+12	R	R		21	UNB21	L	36	X-1AP	R	34 DBL LEAD		L	4			3	21	+1	
GEO	13	1 1	2/9	+11	R	R		10	DBLS SL GN	L	A4	A-1AP	P			Z	5			4	21	+8	
GEO	14	1 1	3/1	+3	R	S R		21	WG PRO NEAR	L	36	6-6	P		P34WAG 7-1-DR	B		SC	I	Q	12	+3	TD
GEO	15	1 2	1/10	+41	L			20	INV 3W GN	R	57	6-7	P		P54WAG 8CR-17	B		DN	C	X	81	+20	
GEO	16	1 2	1/10	+21	L			20	INV 3W GN	R	56		R	54 LEAD		L	4			5	21	+19	
GEO	17	1 2	1/2	+2	L	G R		21	UNB21 SPD	R	36	X-3	R	34 LEAD		L	4			3	21	+0	
GEO	18	1 2	2/2	+2	M	G R		21	WG PRO NEAR	R	36	6-6	P		P34WAG CRDR1-DR	B		WC	C	Y	84	+2	TD
GEO	19	1 3	1/10	-29	L			20	INV 3W SPD GN	R	56	Z-4	R	56 STR		Z	6			5	21	+3	
GEO	20	1 3	2/7	-32	R			11	BANDIT GN	R	A4	Z-2AP	P		P50 47FL39	S		SC	C	Z	81	+3	
GEO	21	1 3	3/4	-35	L								N									+0	
GEO	22	1 3	3/4	-35	R			11	BANDIT GN	L	A4	5-4	P		P30 93FLBU2	3		S1	I	4	21	+0	PT
GEO	23	2 4	1/10	-22	L			20	INV 3W GN	R	47	6-7	R	47 STR		Z	7			4	21	+2	
GEO	24	2 4	2/8	-24	L			20	INV 3W GN	R	46		P		P50 42-4	S		WC	C	X	81	+9	
GEO	25	2 4	1/10	-33	L			20	INV 3W GN	R	46	6-6	R	44 SP ZONE		Z	4			4	21	+4	
GEO	26	2 4	2/6	-37	L			10	DBLS SL GN	R	A4	A-1AP	R	45 STR		Z	5			4	2	+11	
GEO	27	2 4	1/10	-49	L			21	PRO	R	36	6-6	R	35 CTR FB		C	5			3	2	+5	
GEO	28	2 4	2/6	+47	L			11	TRIPS SL GN	R	A5	U-1AP	R	56 STR		Z	6			5	2	+5	
GEO	29	2 4	3/1	+42	R	S		21	WG PRO NEAR	L	36	6-6	P		P35WAG 7-1-CR	B		SC	I	X	82	+0	
GEO	30	2 5	4/1	+32	R	S		21	WG PRO NEAR	L	36	6-6	N									+0	PT
GEO	31	2 5	1/10	-20									N									+0	
GEO	32	2 5	1/15	-36	R			20	INV 3W GN	L	56	4-5	R	55 CTR FB		C	5			5	2	+3	
GEO	33	2 5	2/12	-39	R			10	A TRIO GN	L	A	4-A	P		P30ALUB Z AUBURN	S		S1	C	Z	8	-1	
GEO	34	2 5	3/13	-38	L			20	INV 3W GN	R	SP		P		P50 76-19	5		-	Q	Q	12	+0	PT
GEO	35	2 6	1/10	-35	R			20	INV 3W GN	L	56		R	55 ZONE		Z	5			5	21	+21	
GEO	36	2 6	1/10	+45	R			20	INV 3W GN	L	56	4-5	R	55 CTR FB		C	5			5	21	+3	
GEO	37	2 6	2/6	+41	R			11	INV BAN GN	R	A4	Y-1AP	P		P50 2WH-6DR	5		SF	C	Y	84	+15	
GEO	38	2 6	1/10	+27	R			20	INV 3W GN	L	47	6-7	R	47 STR		Z	7			4	2	+0	
GEO	39	2 6	2/10	+27	R			11	A TRIPS GN	R	Z	5-Z	P		P50 H7999	5		-	S	Q	12	+0	
GEO	40	2 6	3/10	+27	R								N				0					+0	
GEO	41	2 6	3/10	+27	R			20	INV 3W GN	L	SP		P		P50 8CR-19	5		DN	C	S	8	+21	
GEO	42	2 6	1/6	+6	R	R		20	INV 3W GN	L	46	6-6	R	46 SP ZONE		Z	6			4	21	+0	FM
GEO	43	3 7	1/10	-22	R			20	INV 3W SPD GN	L	56	Z-3	R	56 STR OPT (GIVE)		O	6			5	21	+3	
GEO	44	3 7	2/7	-25	L			20	INV 3W GN	R	5X	4-X	P		P50 93FL7SP	5		WS	C	5	33	+0	
GEO	45	3 7	3/7	-25	L			20	INV 3W GN	R	46		P		71 DR29-9	5		SC	I	Z	9	+0	PT
GEO	46	3 8	1/10	-31	R			21	PRO	L	36	6-6	P		P30 H1SP-2	3		SC	C	Z	6	+5	
GEO	47	3 8	2/5	-36	L			20	INV 3W GN	R	46	6-6	R	44 SP ZONE		Z	4			4	21	+2	
GEO	48	3 8	3/3	-38									N									+0	
GEO	49	3 8	3/3	-38	M			11	CL TRYPS NR GN	L	A4	S-3AP	P		P45BT 919-CR	B		SF	C	S	8	+0	PT

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This report shows the detail of a single field over a variety of predefined fields. This report could also be called a tally report as it "tallies" the frequency of the field's occurrences against a set of values.

Sample question these reports would answer
- *Can you show me the run/pass ratio of different situations based on personnel grouping?*

Report: Pers Summary
            PERS #01

Page 1   Sat 4-Mar-06 7:31 AM

21 Personnel
Rush: 39 59%
Pass: 27 41%
Total: 66

20 Personnel
Rush: 30 53%
Pass: 25 47%
Total: 55

11 Personnel
Rush: 9 17%
Pass: 44 83%
Total: 53

10 Personnel
Rush: 8 42%
Pass: 11 58%
Total: 19

30 Personnel
Rush: 9 100%
Pass: - 0%
Total: 9

Report Format #3 - Crosstab (Two-dimensional)

This report is similar to setting up a grid with different fields across the top and down the side (the "X" and "Y" axis). The report then gives you the occurrence of plays that fit with each of the grid boxes.

Sample question these reports would answer
- *Can you show me the frequency of occurrences of play types for each down/distance group?*

Report: R/P Favorites by D/D
          D/D #01

Page 1   Sat 4-Mar-06 7:16

Florida Offense vs

1. Georgia   29-Oct-2005
2. Vanderbilt 5-Nov-2005
3. USC   12-Nov-2005

Down and Distance

1st of Series	Slightly Favor Run 56%	
Earned 1st Downs	Slightly Favor Run 54%	
1st 11+	50% Run, 50% Pass	
1st 1-9	Heavily Favor Run 80%	
All 1st Downs	Slightly Favor Run 56%	
2nd 7+		Slightly Favor Pass 58%
2nd 4-6	Favor Run 62%	
2nd 1-3		Favor Pass 70%
3rd 7+		Heavily Favor Pass 94%
3rd 3-6		Heavily Favor Pass 93%
3/4th 1-2	Slightly Favor Run 58%	
4th 3+		Heavily Favor Pass 100%

	Run Types							Pass Types						Runs	%	Passes	%	Plays
	Z	C	O	L	W	Q	X	5	B	P	S	3	X					
1st of Series	7	4	4	1	2	-	-	3	4	5	-	2	-	18	56%	14	44%	32
Earned 1st Downs	9	7	3	6	1	-	2	10	6	4	3	1	2	28	54%	24	46%	52
1st 11+	-	1	-	-	-	1	-	2	-	-	-	-	-	2	50%	2	50%	4
1st 1-9	1	-	-	1	-	1	1	-	-	-	1	-	1	4	80%	1	20%	5
All 1st Downs	17	12	7	8	3	2	3	15	10	9	4	3	3	52	56%	41	44%	93
2nd 7+	7	2	4	1	1	-	2	13	3	1	2	-	2	15	42%	21	58%	36
2nd 4-6	6	3	3	2	1	-	-	4	3	1	1	-	-	15	63%	9	38%	24
2nd 1-3	1	-	2	-	-	-	-	2	3	1	1	-	-	3	30%	7	70%	10
3rd 7+	-	-	-	1	-	-	2	14	-	-	1	-	2	1	6%	17	94%	18
3rd 3-6	1	-	-	-	-	-	-	10	1	-	-	2	-	1	7%	13	93%	14
3/4th 1-2	2	-	1	1	2	1	-	-	4	1	-	-	-	7	58%	5	42%	12
4th 3+	-	-	-	-	-	-	-	2	-	-	-	-	-	-	0%	2	100%	2
TOTAL	34	17	17	13	7	3	7	60	24	13	9	5	7	94	45%	115	55%	209

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Report Format #4 – 3-Way Comparison (three-dimensional)

This report format is similar to the crosstab, but actually gives you more detail. Instead of just giving you the frequency of the "X" and "Y" data field's intersections, this report displays the details from a third field when the play occurrence is equal to both the "X" and "Y" data values.

Sample question these reports would answer
- *Knowing the down and distance and the offensive personnel, what were the offensive formation and play-calls for each combination?*

Report: D/D Plays by Formation
PLAY #02 (No RZ)

Page 2 — Sat 4-Mar-06 7:34 AM

Florida Offense vs
1. Georgia — 29-Oct-2005
2. Vanderbilt — 5-Nov-2005
3. USC — 12-Nov-2005

2nd 1-3

21	Reps:4	Runs:50%	Passes:50%
PRO		WHAM OPT 1	Boot 1 / Play Act 1
TWINS		LD OPT 1	

11	Reps:2	Runs:0%	Passes:100%
BANDIT			5/7 Step 2

2nd 4-6

11	Reps:9	Runs:22%	Passes:78%
BANDIT			5/7 Step 4 / Play Act 1
TRYPS		STR OPT 1	5/7 Step 1 / Boot 1
TRIPS		STR 1	

21	Reps:8	Runs:50%	Passes:50%
PRO		CTR FB 1 / LEAD 1 / WHAMG 1 / ZONE OPT 1	Boot 2 / Screen 1
TWINS			Boot 1

20	Reps:5	Runs:80%	Passes:20%
3W		SP ZONE 2 / LD OPT 1 / STR OPT 1	5/7 Step 1

10	Reps:2	Runs:50%	Passes:50%
DBLS		STR 1	
TRIO			5/7 Step 1

30	Reps:2	Runs:100%	Passes:0%
SPLIT		CTR FB LD 2	

00	Reps:1	Runs:0%	Passes:100%
EMPTY			5/7 Step 1

2nd 7+

11	Reps:10	Runs:20%	Passes:80%
BANDIT			5/7 Step 5
TRIPS		STR 1	5/7 Step 1
TRYPS			5/7 Step 1 / Screen 1

20	Reps:8	Runs:50%	Passes:50%
3W		CTR FB 1 / LD OPT 1 / STR OPT 1	5/7 Step 3 / Play Act 1
UNB20		LD STR 1	

21	Reps:4	Runs:50%	Passes:50%
TWINS		LD OPT 1	Boot 2
PRO		CTR FB 1	

10	Reps:2	Runs:50%	Passes:50%
DBLS		STR 1	
TRIO			Screen 1

30	Reps:2	Runs:100%	Passes:0%
SPLIT		DBL LEAD 1 / STR OPT 1	

00	Reps:1	Runs:0%	Passes:100%
EMPTY			5/7 Step 1

3rd/4th 1-2

21	Reps:5	Runs:80%	Passes:20%
PRO		WHAM FB 2 / LEAD 1 / QB SNK 1	Boot 1

3rd/4th 3-6

11	Reps:9	Runs:11%	Passes:89%
BANDIT			5/7 Step 3 / 3 Step 1 / 5/7 Step 2
TRYPS			3 Step 1 / Boot 1
TRIPS		ZONE 1	

10	Reps:3	Runs:0%	Passes:100%
DBLS			5/7 Step 3

00	Reps:1	Runs:0%	Passes:100%
EMPTY			5/7 Step 1

20	Reps:1	Runs:0%	Passes:100%
3W			5/7 Step 1

3rd/4th 7+

11	Reps:9	Runs:0%	Passes:100%
TRYPS			5/7 Step 5
BANDIT			5/7 Step 2 / Trick 2

20	Reps:6	Runs:0%	Passes:100%
3W			5/7 Step 5 / Screen 1

10	Reps:3	Runs:33%	Passes:67%
TRIO		LEAD 1	5/7 Step 1
DBLS			5/7 Step 1

Report Format #5 - Graphic Reports

This is a representation of the play data in graphic form, such as in a bar chart and/or pie chart. This graphic representation of the information is yet another way to help you interpret the data.
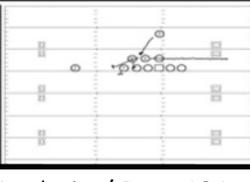
Sample question these reports would answer
- *Can you show me graphically the overall run/pass ratio and the top personnel groups run and pass ratios?*
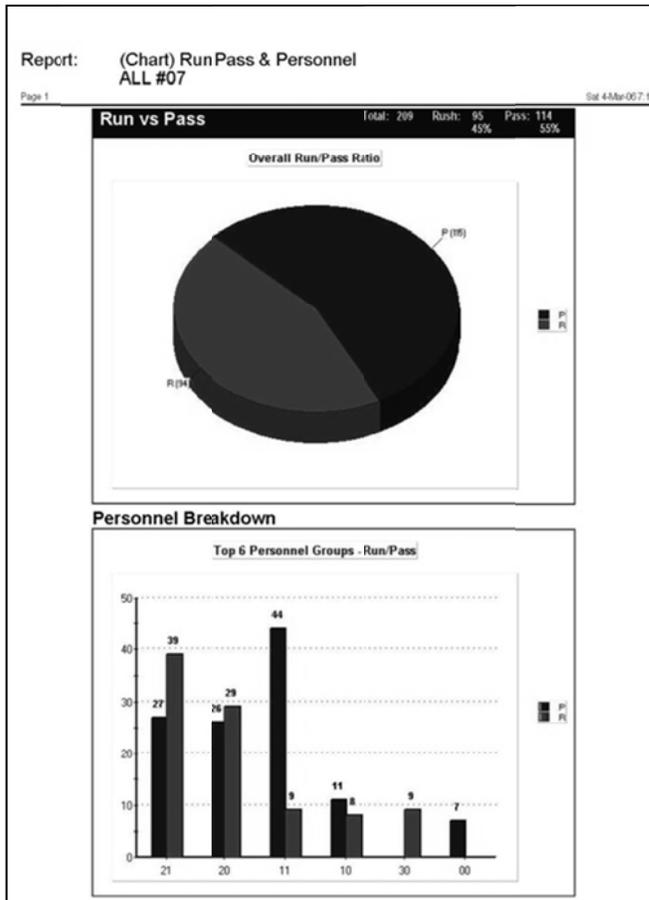
Report Format #6 - Hit Chart

This report is a point of attack representation of the plays. The value of the hole hit and pass zone fields are graphically displayed to show where the ball was run or thrown. Good computer programs will automatically draw in the formations on the report.

Sample question these reports would answer
- *Can you show me a formation hit chart with run holes and pass zones as well as a play list?*
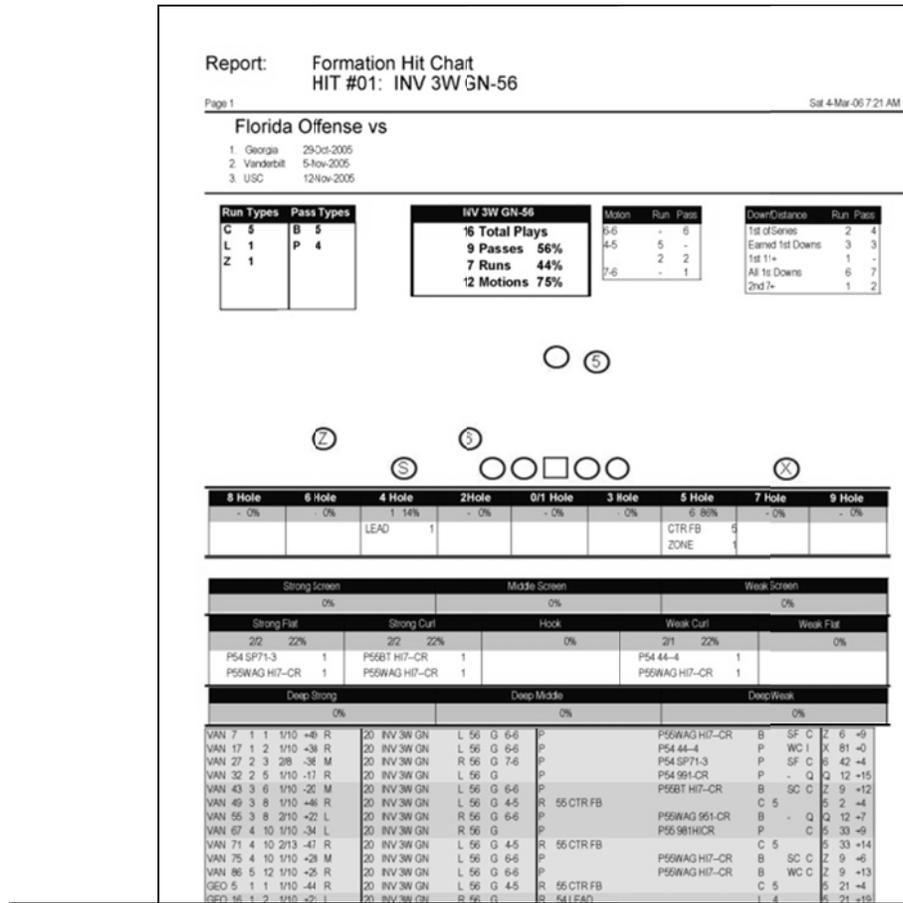
Report Format #7 - Play Drawings / Pictures

This report format is the use of a play drawing and/or a still image in addition to the text description of the play. A picture is worth a thousand words. Good computer programs will let you print reports using play drawings and/or video stills with the associated play data.

Sample question these reports would answer
- *Can you show me a picture and a play drawing for each play in game order?*

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Report Format #8 - Special Report

A special report format allows the computer to analyze data, reporting back specific answers to specific questions.

Sample question these reports would answer
- *Can you show me the analysis of the passing routes, including showing me all of the route combinations based on alignment?*

Appendix A – Data Field Table

#	SECTION	FIELD NAME	(N)umber/(T)ext	FIELD TYPE PERSISTANT	FIELD TYPE AUTO	FIELD TYPE MERGE	FIELD TYPE CALCULATED	FIELD TYPE **CALULATED	LENGTH	VALUE LIST
1		Play Number	N		X				1	
2		Quarter	N	X					1	1, 2, 3, 4, 5
3		Series Number	N		X				2	
4		Series Sequence	N		X				2	
5		Series Begin	T						2	KO,PT,FM,IN,FG,EX,OT
6		Down	N		X				1	1, 2, 3, 4, 5
7		Distance	N		X				2	
8	Situational Data	D/D	T			X			4	
9		DD Grouping	T				X		20	
10		Field Position	N		X				3	
11		FP Grouping	T				X		20	
12		Short yardage/ GL	T					X	2	SY, GL
13		RZ / Coming Out	T				X		2	RZ, CO
14		Hash	T						2	R, RM, M, LM, L
15		Score Differential	N	X					3	
16		Two/Four Minute	T						2	2H, 2G, 4
17		Situations	T						8	
18		Personnel	T						3	
19		Formation Group	T						10	
20		Formation Strength	T						1	L, R
21		TE Location	T						1	L, R
22		Set	T						18	
23		Shotgun	T						1	G
24	Formation Data	Backfield	T						3	
25		Formation	T			X			22	
26		Alignment	T						3	
27		Boundary	T				X		1	B
28		Movement	T						8	
29		Audible/No-huddle	T						1	A, N, C
30		Bunch Formation	T						1	B
31		Strong-side Split	T						1	O, N, A, H, M
		Weak-side Split	T						1	O, N, A, H, M

#	SECTION	FIELD NAME	(N)umeric or (T)ext	FIELD TYPE					LENGTH	VALUE LIST
				PERSISTANT	AUTO	MERGE	CALCULATED	*CALUATED		
32		Run/Pass/No Play	T						1	R, P, N
33		Play Type	T						1	
34		Play Code	T						6/10	
35	Play Data	Blocking Scheme	T						12	
36		Blocking Adjust	T						10	
37		Pass Concepts	T						2	
38		Pass Description	T						20	
39		Rec Jerseys (5)	N						2	
40		Rec Position (5)	T						2	
41		Rec Routes (5)	T						4	
42		Offensive Play	T			X			40	
43		Hole Hit	T					X	1	
44		Pass Result	T						1	C, I, D, P, S, R
45		Pass Zone	T						2	
46		QB Pressure	T						1	P, H, S
47		Ball Carrier/Rec	T						1	
48		Jersey Number	N						2	
49	Play Outcome Data	Play Direction	T				X		1	L, M, R
50		Action	T						5	Flow,Flood,Split Empty
51		Gain/Loss	N						3	
52		Penalty	T						6	
53		Penalty Yards	N						3	
54		Penalty Jersey	N						2	
55		Win/Loss	T					X	1	
56		Series End	T						2	TD, FG, PT, FM, IN, SF, HF, GM, DN
57		Def Personnel	T						6	
58		Front	T						10	
59		Deployment/ Front Adj	T						10	
60	Defensive Data	Attack Point	T						3	
61		Stunts	T						10	
62		Pressure Type	T						6	
63		Pressure	T						10	
64		Coverage Group	T						3	
65		Coverage	T						10	
66		Defense	T			X			40	

Appendix B - Technical Scouting Techniques

Technical scouting is the evaluation of individual players and their skill sets. I recommend each coach formulate a complete set of questions for each offensive position – QB, RB, TE, WR, OT, OG/OC. Each week, the defensive position coach should complete a form for each of the starters their players will face.

- DT coach completes the OG/OC forms

- DE coach completes the OT forms

- LB coach completes the TE/RB and QB Run Game forms

- DB coach completes the WR and QB Pass Games forms

This process will not only enable you to scout effectively and efficiently, but the information recorded can also be very valuable to the players. Questions for each position will vary by the defensive staff, their defensive scheme, and the time available to scout. Here are a few examples of questions the DB coach could ask about each WR on a weekly basis.

WR TECHNICAL EVALUATION SAMPLE QUESTIONS

NAME _____ JERSEY # _____

HT _____ WT _____ SPEED_____ CLASS _____

SCHOOL _____ HOMETOWN _____

1. Does the WR always align to the right or the left?

2. Does the WR always align to and away from the formation strength?

3. Does the WR align in the slot?

4. What routes does the WR align run when his outside foot is forward?

5. What routes does the WR align run when his inside foot is forward?

6. Does he tip run or pass in any body language?

7. In press coverage, what type of release does the WR attempt? (inside/outside? speed move or double move?)

8. Is he physical?

9. Does he use his hands in getting separation in pass routes

10. Does he use his hands well in run blocks?

11. Does he cut block?

12. What routes does he run when he motions?

13. What routes does he run on 3rd down?

   Etc, etc, etc….

Appendix C - Cheat Sheets

SERIES BEGIN – KO - Kickoff (including free kick following a safety)   PT - Punt
    FM – Fumble   IN - Interception   FG - Missed FG   EX - Extra Point   OT - Other

PERSONNEL – Number of RBs, followed by number of TEs

FORMATION

ONE-BACK FORMATIONS	TWO-BACK FORMATIONS
10 - DOUBLES (2 WRs on each side)	20 - 3 WIDES (2 WR strong 1 WR weak)
10 - TRIO (3 WRS strong, 1 WR weak)	21 - PRO (WR/TE strong, WR weak)
11 - ACE (WR/TE strong, 2 WRs weak)	21 - TWINS (TE strong, 2 WRs weak)
11 - TRIPS (TE strong, 3 WRs weak)	22 - PROT (WR/TE strong)
11- TRYPS (2 WRS/TE strong, WR weak)	22 - TE PRO (2TE strong, WR weak)
12 - TECH (WR/TE on each side)	23 - 3 TE (2 TEs strong, TE weak)
12- TECH TWINS (2 WRs/TE strong, TE weak)	30 - SPLIT (1 WR on each side)
12- TE ACE (2 TEs strong, 2 WRs weak)	31 - 3 BACK (TE strong, WR weak)
12 - TE TRIPS (WR/2 TEs strong, WR weak)	32 - TIGHT (TE strong and weak)
13 - 3TECH (2 TEs strong, TE/WR weak)	
13 - 3TTWIN (WR/2 TEs strong, TE weak)	
13 - 3TTRIP (3 TEs strong, WR weak)	

POSITION LETTERS

WR / #1 Strong WR = Z, #2 Strong WR = S, #3 WR = U, #2 Weak WR = A, #1 Weak WR = X
TE / 1st TE = Y, 2nd TE = E, 3rd TE = U

BACKFIELD
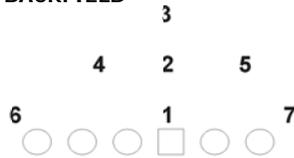
ONE-BACK BACKFIELD SETS	TWO-BACK BACKFIELD SETS
3 - behind QB/4 or more yds	I - FB "2" , TB "3"
2 - behind QB/within 4 yds	IN - FB "4", TB "3"
4 - TB shifted to str	IF - FB "5", TB "3"
5 - TB shifted away from str	NR - FB "4", TB "2"
P – Pistol	FR - FB "5", TB "2"
	SP - RB "4" and "5"

FORMATION ADJUSTMENTS

FX	(Flex)	TE is four or more yards off OT
TO	(Tackle Over)	Backside OT lines up on strongside. TE does not switch places.
NUB	(Nub)	TE and backside OT exchange places
NR	(Near)	WR is 1-3 yds off OT and is on LOS
SL	(Slot)	WR is 1-3 yards off OT and is off LOS
WG	(Wing)	WR is 1-3 yards off TE and off LOS
TI	(Tight)	two or more receivers are 3-4 yds apart and are 1-3 yds from OT
COV	(Cover)	two or more receivers on the same side of the center on the LOS
BU	(Bunch)	two or more receivers are 3-4 yds apart and are 4 or more yds from OT
IN	(Inverse)	** 2 rec side - Receivers switch normal position on/off LOS
EX	(Exchange)	** 2 rec side - TE and WR exchange normal alignment position
A	(Inv type "A")	** 3 rec side - Receivers switch normal on/off LOS with middle receiver on
B	(Inv type "B")	** 3 rec side - Receivers switch normal on/off LOS with inside or outside on
XA	(Exchange "A")	** 3 rec side - TE & WR exchange normal position with TE being middle rec.
XB	(Exchange "B")	** 3 rec side - TE & WR exchange normal position with TE being outside rec.
GN	(Shotgun)	Quarterback in a shotgun alignment behind the center

WR/TE MOVEMENT
1. First part is the letter or number of player AT THE TIME OF THE SNAP OF THE BALL.
2. This is followed by a dash
3. Number of eligible receivers (not counting the QB) this player crosses from his initial alignment to his spot at the snap of ball.
4. End with motion code. ("AP" for across center, "IP" for in towards, but not crossing center, "OP" for motion away from center)

Exceptions to this rule - (1) 0IP = "Rat" (2) Motion and return is letter, dash, letter

RB MOVEMENT
Number/letter describing initial spot, dash, and then number/letter describing location at snap

STRONG-SIDE/WEAK-SIDE SPLIT
O = "Outside" – this is the space between the numbers and the sideline
N = "Numbers" – this is being aligned on the numbers
A = "Alley" – this is the space halfway between the hash and the top of the numbers
H = "Hash" – this is aligned within three yards of the hash.
M = "Middle" – this is the space between the hashes

PLAY TYPE
Run Play Types
1. "C" Counter - Two blockers coming from the backside. (Also one-step cutback play)
2. "D" Draw - Defenders come upfield, showing pass blocking, followed by a delay handoff
3. "F" FB Runs - Any running plays where the fullback is the ball carrier
4. "L" Lead/Iso/Power - Play with a lead blocker who comes from the play-side of formation
5. "O" Option - Plays that can have more than one possible ball carrier
6. "Q" QB Runs - QB as the only possible ballcarrier (don't confuse with option)
7. "R" Trap - Crossing blockers that block defensive linemen
8. "T" Toss or Sweep - Tossing or handing the ball to the RB to go outside of offensive tackle.
9. "W" Wham - one blocker coming from the backside.
10. "Z" Zone - Plays that have primarily one-on-one blocking and no lead blocker
Pass Play Types
11. "3" Quick - QB takes three steps and throws
12. "5" Dropback - QB takes five or seven steps and throws
13. "6" Sprint - QB "rolls out" (moves sideways) towards the sideline.
14. "P" - Play-action - Offense fakes a running play to hold LB and slow down the pass rush
15. "S" Screen - QB throws to a designed pass to a receiver behind the LOS.
16. "B" Boot, Waggle, PA Roll
13. Boot - Fakes a running play, then QB rolls opposite direction of all of the RBs
14. Waggle - Fakes a running play, then QB rolls in opposite direction of 2nd RB and in the same direction as first.
• PA Roll - Fakes a running play, then QB rolls in the same direction of all of the RBs
17. X - All Tricks plays (runs or passes), such as reverses or double passes
    ○ Trick Run - Any running play where the TB, FB or QB is not the ball carrier
    ○ Trick Pass - Any passing play where the ball is thrown by anyone but the QB

PASS RESULT
"C" = Complete, "I" = Incomplete, "P" = Interception, "S" = Sack, "R" = QB scramble, "D" = Dropped

ROUTES

CB - Comeback	DR - Drag	HT - Hitch	QO - Quick Out
CL- Curl	DO - Deep Out	IN - In	SL - Slant
CI - Circle	FD - Fade	OP - Option	SM - Seam
CN- Corner	FL - Flare	OT - Out	SP - Spot
CR - Cross	FT - Flat	PT - Post	WH - Wheel
DE - Delay	GO - Go		

PASS CONCEPTS

QK / Quicks	All routes involving a three-step QB drop
MV / Movement	Routes involving the QB moving out of the pocket, either by sprint or boot
BN / Bunch	Route combinations originating from a bunched formation
HV / Heavy	All routes run out a heavy formation, such as SY/GL
HO / Horizontals	Underneath routes designed to "high-low" an underneath defender
IN / Individuals	Underneath routes that do not intersect
DR / Drive	Routes involving two crossers (one shallow) that start from the same side
LV / Levels	Routes involving two crossers (one shallow) that starts from opposite sides
IS / Inside Stack	Combination located between the numbers with stacked routes (underneath & deep)
OS / Outside Stack	Combination located outside the numbers with stacked routes (underneath & deep)
CR / Crosser	Route combinations involving at least one deep over route
VT / Vertical	Routes designed to attack deep areas of the field

PASS ZONE

Screen Zones	SS = Strong Screen, MS = Middle Screen, WS = Weak Screen
Underneath	SF = Strong Flat, SC = Strong Curl, MH = Hook, WC = Weak Curl, WF = Weak Flat
Deep Zones	SD = Deep Strong, MD = Deep Middle, WD = Deep Weak

QB PRESSURE

P = QB Pressure/Hurry, H = QB Hit, S = QB Sack

ACTION

FLOW - If 4+ players are on the strong-side of formation, either at the snap or by their movement
FLOOD - If 3+ players are on the weak-side of formation, either at the snap or by their movement
SPLIT - If it remains three on the strong-side and two on the weak-side
EMPTY - If they align in an empty set, the value is "empty".

SERIES END

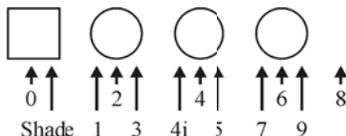|			
FG - FG Attempt (made or missed)	TD – Touchdown	PT – Punt	SF – Safety
FM – Fumble	IN – Interception	HF – Halftime	GM – Game
DN – Downs			

FRONT

1ST DIGIT	FRONT FAMILY	ALIGNMENT
20	UNDER	Center and weakside covered
30	ODD (3DL)	Center covered, both guard uncovered (3 DL)
40	EVEN	Both guards covered
50	OVER	Center and strongside covered
60	ODD (4DL)	Center covered, extra end strong (4 DL)
70	ODD (4DL)	Center covered, extra end weak (4 DL)
90	BEAR	Center and both guard covered

2ND DIGIT	LINEBACKER ALIGNMENT
3	Both Sam and Will on LOS
5	Sam in LOS, Will off LOS
7	Sam off LOS, Will on LOS
9	Both Sam and Will off LOS

ATTACK POINT

0 - head up on the center   **S** - "shaded" shoulder of the center
1 - inside shoulder of guard   **2** - head up on the guard   **3** - outside shoulder of guard
i – "4i" inside shoulder of tackle   **4** - head up on tackle   **5** - outside shoulder of tackle
7 - inside shoulder of tight end   **6** - head up on tight end   **9** - outside shoulder of tight end
8 - extremely wide alignment

PRESSURE TYPE

COVERAGE	RUSHERS	DASH	DIRECTION
"Z" = Zone Coverage "M" = Man Coverage	Number of total rushers	"Dash"	"W" = all extra rushers from weak-side of formation
			"S" = all extra rushers from strong-side of formation
			"O" = all extra rushers from the outside (strong & weak)
			"I" = all extra rushers attacking the inside gaps (A gap)
			"C" = combination of the four groups listed above.

COVERAGE GROUP

COVERAGE GROUP	CODE	DEFINITION
Zone - Cover 2	2	Any 2 deep coverage (2 cloud, 2 sky, etc)
Zone - Cover 3	3	Any 3 deep coverage (3, 3 roll, qtr/qtr/half)
Zone - Cover 4	4	Any 4 deep coverage
Zone Blitz – Cover 2	ZB2	Any 2 deep coverage with DL dropping and extra rushers
Zone Blitz – Cover 3	ZB3	Any 3 deep coverage with DL dropping and extra rushers
Man Coverage	MC	Any coverage playing man with no extra rushers
Man Pressure	MP	Any coverage playing man and has extra rushers