0 Ski Racing Strategy Blog

The purpose of this document is to list the Fastpitch Strategy documents. Included in the list are the introductory purpose paragraph, a link to the document on line and the copyright date.

24 Skiing Simplified: Edge Sets and Tension for Balance

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The purpose of this document is to define tension, the tension used keep balanced in skiing. Skiing is a series of up and down movements. If turning, the up movements create an edge set. Up movements put weight on the edges and down movements un-weight. Tension is what we do with our body when we are un-weighting the skis. Tension keeps the body with the skis. Without tension, the body naturally falls back and to the inside of the turn. Tension keeps the body balanced over the middle of the ski, which is in front of its narrowest part back at our heel. Whether going forward or backward, the skis are designed to turn from this point. Tension keeps the body balanced over the outside edge. Tension gets us around the corner before we have to catch-our-weight again, also known as the edge set. Since the edge set happens in an instant, we use tension and unweighting almost all the time.

23 Skiing Simplified: Edge Sets - Skipping Forward and Running Backward

Copyrighted 10/17/2019 by Robert D. Pace

The purpose of this document is to define edge-sets by associating them with running. In skiing, we bend or extend the leg to unweight the ski to get over the hump. In other words, skiing is a series of up and down movements. The up movements are quick and the down movements are not. Without getting in to “down unweighting”, we jump up and float down. The edge set is the platform made when we go up or unweight the ski. This document will associate the edge sets with running where we also jump up and float down. There are several correct ways we make edge sets, and there are several ways we run, each one corelating with one of the skiing edge-sets. The way the arms swing, also the same, one for each edge set.

22 Skiing Simplified: Edge Sets

Copyrighted 05/26/2019 by Robert D. Pace

The purpose of this document is to define edge sets used in both ski racing and pleasure skiing. Because we have to ski foot to foot or change the feet over which we are balancing, there is always an edge set. And, because we have to move forward to stay balanced over our skis, there is always an edge set when we change feet. The purpose of this document is to define two types of edge sets, one to increase speed and one to control speed or direction. Most people we see skiing on the hill use the one to slow

down, but they do not slow down because they add a second inappropriate edge set that puts them out of balance again.

21 Skiing Simplified: Getting Over the Hump

Copyrighted 11/08/2018 by Robert D. Pace

The purpose of this document is to define the things we need to know to stay balanced when skiing. These strategic things need to be known before put into practice, and they are practiced by both racers and first day beginners. These things are twisting, pulling and pushing. To stay balanced, we twist the skis forward, and pull or push them backward. It's all about bumps. Some bumps are real and others are apparent. It is even about avoiding bumps for both racers and first day beginners.

20 Skiing Simplified: One Ski Skiing, Understand It

Copyrighted 10/20/2016 by Robert D. Pace

The purpose of this document is to define one ski skiing. Skiing on one ski is not easy, but it is a very good for understanding balance, and the separation and independent leg action required to perfect it. In a previous document (Turn Defined as a Bump) we related a turn to skiing up and over a bump. This document advances that idea, by declaring that when one ski is starting down the backside of the bump, the other ski is starting up the front side of the bump. In other words, the inside ski and the outside ski are on opposite sides of the bump. To keep our balance, the idea is to always be standing on the backside of the bump. The idea is to use gravity to roll out of the turn on the back side of the bump. The idea is to stay on top of the downhill ski. The critical point for this weight change is when both skis are pointed down the fall line. At that point, if we have two skis, we stand on the downhill ski and stay on that ski until the next fall line. At that point 100% of our weight is on the outside ski as we push on the backside of the bump down the fall line as it becomes the inside ski. At that point we pull ourselves down the hill over that ski as it is becoming the inside ski. At that point our ski rolls under our body to the inside position. At that point we relax that leg using gravity to keep our balance. If we do it quickly it is easy to stay forward and balanced over our skis. One ski skiing forces us to learn how to initiate the turn from the downhill ski using gravity. We already know how to initiate the turn from the uphill ski using gravity.

19 Skiing Simplified: Ankle Flexion and Separation

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The purpose of this document is to define the ankle flexion with separation used to balance when skiing. In other words, it defines a forward hip position in relation to the feet for balance. Understanding ankle flexion with separation requires the definitions in yesterday' document "Skiing Simplified: Separation, Curves and Lines". Ankle flexion needs to be defined in relation to those lines and curves. Because, when our skis are on edge we can't balance with our chest facing the same direction as our skis. Separation requires ankle flexion and vice versa. Obviously, balance is important, and this

understanding of flexion, separation, lines and curves is required to maintain balance when skiing. Because we balance in the center of the ski, everything described here applies to all kinds and levels of skiing: beginning to expert; all types of racing: slalom to downhill, and all types of snow conditions from powder to ice.

18 Skiing Simplified: Separation Curves and Lines

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The purpose of this document is to define two lines for separation used to balance when skiing. In other words, it defines the upper and lower body separation used to balance in terms of two momentum curves and two corresponding straight lines used to maintain that balance. Obviously, balance is most important, and this understanding of lines and curves is required to maintain balance when skiing. Everything described here applies to all levels of skiing: beginning to expert; and all types of racing: Slalom to Downhill.

17 Skiing Simplified: Drift Turns Defined as Bumps

Copyrighted 12/11/2014 by Robert D. Pace

The purpose of this document is to define a skiing drift turn by relating it to a bump. The previous document defined a skiing turn by relating it to a bump. For example: it described an arc or "C" shaped turn. This one will describe a drift turn or "L" shaped turn. Simply stated, a drift turn is a side-slip along the line of momentum that ends in an "edge-set" or stivot that sharply turns the skier's momentum to the fall-line. It uses the combination of gravity and terrain called the "fall-line" at the edge-set to change direction. From that apex or midpoint of the turn, both turns finish the same. The only difference is in the second quarter of the turn. To understand balance, I like to relate the whole turn to a bump.

16 Skiing Simplified: Defining a Turn as a Bump

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The purpose of this document is to define a skiing turn by relating it to a bump. A skier works with the forces of gravity, terrain and momentum. By changing direction in relation to both gravity and momentum, a skiing turn can be related to a bump in the terrain. The front side of the turn relates to the back side of a bump and the back side of a turn relates to the front side of a bump. The shape of the ski and the three forces cause this relationship. At the beginning of a turn the terrain seems to fall away from us like it does on the back side of a bump and at the end of a turn the terrain seems to come at us like it does on the front side of a bump. In other words, a turn seems to change the shape of the mountain (to create terrain). Therefore, balance over a bump relates to balance in a turn.

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15 Skiing Simplified: The L Shaped Tool (Version 2)

Copyrighted 12/28/13 by Robert D. Pace

The purpose of this document is to define a very important "L" shaped skiing tool. It is the ski boot, but I want to focus on its shape; and the use of that shape as a tool where turning power is important, right at the beginning of the turn. Because of the irregular curves found in terrain, it can't be too stiff, too heavy or too powerful. But, with subtle movements of the lower body right at the beginning of a turn you want the boot to powerfully influence the ski. In other words, at that point you want the boot to leverage or multiply your effort. Plus, here at this point we twist this "L" shaped lever one way to go faster and another way to go slower. The twist point is important, and most skiers need to improve its definition. This version emphasizes lower body power.

14 Schweitzer Homologation

Copyrighted 12/06/2012

The purpose of this document is to define Schweitzer Mountain. The official word in defining or measuring mountains is Homologation, and it is automatic when using the Google Earth (GE) path function on the Ruler in the Tools Menu. I have been creating these paths for our Wednesday hikes described in Boundary County Views. Since Schweitzer is within view of Boundary County, I did the same thing for all the Schweitzer Ski runs. See Schweitzer Mountain in the Boundary County Views: To see the elevation/Homologation and "ski down" the Schweitzer Runs, go to my TeamsWin website and drill down to my Hiking Blog. The Schweitzer Runs are under Schweitzer Mountain in Boundary County Hike Folders at the top of the page. If you click on those folders you will download the GE files you need, and GE will load them if you have it installed; if not, go back to the hiking blog to get access to a free copy.

13 Skiing Simplified: Foot Position

Copyrighted 04/27/2012

The purpose of this document is to define foot position in skiing. Before we understand how our body moves when skiing, it is helpful slow things down to understand the strategic body positions at key points in that movement that control balance. Those key points are defined when the forces of terrain, gravity and momentum change, requiring balance changes like changing the dominant foot. The only thing different between this presentation of balance and others is that it is a strategic (not tactical) description. For example: instead of focusing on the tactical extension movement of the leg it describes the strategic positions of the foot (in relation to the rest of the body) before and after that movement.

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12 Skiing Simplified: Forward Movement

Copyrighted 01/14/12 by Robert D. Pace

The purpose of this document is to define fore and aft movement over the skis. In previous "Skiing Simplified" documents, I have defined the tools we use in skiing besides the skis themselves, tools like the "L" Shaped Tool (ski boot), the Arms for Balance, and using forces as tools like Momentum, Gravity and Terrain. I have also talked about the Down portion of a turn and separated it from the Left and Right Transitions. Using these tools, fore and aft movement happens in the transition. In fact, fore and aft movement seems to require each of these tools to be used separately. Doing so, we develop a pendulum effect. Because the result of not using each of these tools separately results in too much backward movement, everyone seems to want more forward movement. Therefore, to match popular demand I am calling this document just "Forward Movement".

11 Skiing Simplified: Extension and Movement

Copyrighted 01/14/12 by Robert D. Pace

The purpose of this document is to define when to extend the legs in a ski turn. This strategic understanding of the points that can be used for extension should make the dynamic movement and rhythm required for efficient skiing more natural. Previous "Skiing Simplified" documents have defined other strategic (static and relational) elements of skiing. Besides the shape and technology of the skis themselves, they have described: the forces of "Momentum, Gravity and Terrain"; the "L-Shaped Tool" or lever called a ski boot; and how "Arm Positions" indicate the quality of balance or position on the skis. Again (as in all my "Skiing Simplified" documents) my theme is the relationship between slowing down and speeding up. They are both required, they are opposites, and learning to do one efficiently will help in learning the other. With these documents and their relationships as a foundation, this understanding of extension and movement could be the key to more natural skiing for all skiers.

10 Skiing Simplified: Arms and Balance

Copyrighted 12/17/11 by Robert D. Pace

The purpose of this document is to define the use of the arms in balancing on skis. In skiing we initiate movement with the lower body and the upper body reflects and (through balance) empowers that movement. In other words, proper upper body movement results from proper ankle, leg and hip movements. Because they reflect what is happening in the lower body, the arms indicate sensually to the skier when things are going well down below. So, if the arms both look and feel good, we are doing something right with the lower body. Because they are visible to the skier, ski instructors since day one have talked about things like pole plants. Throughout my "Skiing Simplified" documents my theme has been the relationship between slowing down and speeding up. They are both required, they are opposites, and learning to do one efficiently will help in learning the other. Because the end of the turn is usually the same for both, a point at

the beginning right before we go down or through the turn keys their efficiency. Of course (like all opposites) at that key point the arm position for slowing down is opposite the arm position for speeding up. Plus, to fully define how arms relate to balance on skis, this document also defines arm movement after that key point through the turn and transition.

09 Skiing Simplified: The L Shaped Tool

Copyrighted 12/08/11 by Robert D. Pace

The purpose of this document is to define a very important "L" shaped skiing tool. It is the ski boot, but I want to focus on its shape; and the use of that shape as a tool where turning power is important, right at the beginning of the turn. Because of the irregular curves found in terrain, it can't be too stiff, too heavy or too powerful. But, with subtle movements of the body right at the beginning of a turn you want the boot to powerfully influence the ski. In other words, at that point you want the boot to leverage or multiply your effort. Plus, here at this point we twist this "L" shaped lever one way to go faster and another way to go slower. The twist point is important, and most skiers need to improve its definition.

08 Skiing Simplified: Momentum, Gravity and Terrain

Copyrighted 12/06/11 by Robert D. Pace

The purpose of this document is to define three forces useful in understanding or simplifying skiing. I believe they are fundamental strategic entities. Strategic entities are the things that must be understood before working on goals and objectives. In other words, 80% of a solution is the problem definition. Plus, that problem definition is used again to define the solution. For example: a strategy defines three things: 1) Strengths and Weaknesses (character, confidence and motivation); 2) Environment; and 3) Goals and Objectives. In skiing, ski racing and everything else; the definitions in the first two of these are used to define the third. Skiing simplified is all about using rather than fighting forces. Using forces means sensing and balancing on the forces. Because of too much focus on the skis, the problem with skiing is that it doesn't look like it feels. Hopefully understanding (identifying, defining and sensing) these three forces will show how they are used as tools with the ski tool to help rather than hinder a skier's balance.

07 Skiing Simplified: Right Left and Down

Copyrighted 11/14/11 by Robert D. Pace

The purpose of this document is to define three new skiing terms: **right**, **left** and **down**. When we think of skiing as a series of turns, **right** and **left** are the **transitions** between turns and "**down**" is the **turn**. This document could be called "Skiing Simplified – Right, Left and Down". Over the sixty years I have been skiing, most of the big changes have happened in the transition between turns. In the **down** or **turn** part we are either slowing down or accelerating and in my opinion those techniques have not changed

much over the years. I like to divide the **transitions** into **right** and **left** because these days I like to think "**right** on the right foot and **left** on the left foot" in **transition**.

06 Skiing Simplified: Ski Racing – Fast Turns

Copyrighted 12/27/08 by Robert D. Pace

The purpose of this document is to describe fast turns by contrasting them with the best ways to slow down. I believe knowing how to slow down efficiently and effectively will also teach you how to make fast turns. Avoid gravity when slowing down, and use gravity when making fast turns. More specifically, at the apex or top of the turn avoid gravity when slowing down and use gravity when making fast turns.

05 Skiing Simplified: Ski Racing- Be able to slow down

Copyrighted 12/27/08 by Robert D. Pace

The purpose of this document is to record my personal and I believe simplified view of skiing. Because it is more serious than just skiing, I also call it ski racing. Because it helps me be more efficient in my skiing, I would like to share it with my friends. One of my first coaches (Gary Batistella) was for ten years generally known as Canada's best down-hill racer. He taught me: "Before you can go fast you must be able to slow down." I believe the more efficiently one can slow down, the more control, and the faster one can go. Brakes are important on a racecar. The brakes on a ski are the edges. Friction caused by the edges against the snow will slow the skier the same way brakes slow a car.

04 FIS Dictionary

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The purpose of the FIS Dictionary is to add a multimedia capability to the FIS Rules so people can use internet links to see examples of the objects that the rules define. They are a copy of the rules including the rules cross referenced. For the multimedia capability, improved filtering, and cross referencing; they are broken down into sentences and phrases of sentences. The cross referencing and filtering is how we produce the individual rules worksheets and checklists. In conjunction with GIS mapping, local area rules and race history; this multimedia dictionary can completely describe race planning and history. Working like a quals database, an individual workers resume can be quickly produced. Or, race organizers can quickly search that history when building a new team of race workers, listing workers by the various roles or positions being filled, including their contact information.

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03 FIS Rules

Copyrighted 05/10/10 by Robert D. Pace

The purpose of these worksheets is to complete the FIS Rules by including their rule cross referencing and by creating a worksheet for each rule. They are queries to an FIS Rules Access database, from Excel spreadsheets filtered by each rule name.

02 FIS Checklists

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The purpose of these worksheets is to arrange the FIS Rules and Dictionary into a series of Checklists for each of the FIS Ski Race Production Roles. In their current form these checklists are the rules for each of the FIS roles. They are queries to an FIS Rules Access database from Excel spreadsheets, so they could be filtered down to a very short check list.

01 Multimedia Dictionary Intro

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The purpose of this document is to use my business model of ski racing to introduce people to the idea of a multimedia dictionary. A business model produces a dictionary that defines the words of a specific business. Definitions relate words. Definitions define words by showing them in context with other words. A business model produces a special kind of dictionary that not only defines the words, but can display all the views of those relationships. Another word for relationship is rule. Those relationships therefore define the rules of the business, or all the roles the words play in the business.