



## **2023 Interski Report**

***By JF Beaulieu***

In 2007, I was selected for my first Interski Congress in Korea. This honestly feels like it was yesterday. I feel very privileged that CSIA allowed me to be on the team for the 4<sup>th</sup> time for this Interski in Finland. Interski pushes you to places you would have never push yourself. It starts with the preparation towards the selection process. I love to have a goal and train hard to be the best I can be. Once you are in the process, you need to give the best of yourself, every day. I am not only talking about on snow. Your physical-mental training, what you eat, your dedication to research and push what you do, your equipment, your game plan, your fitness, giving amazing session on snow every day. The quest for excellence is so fulfilling.

### **New Role**

This time, I was involved in a new role. My teammates elected me as a Team Captain for this Interski. I really enjoyed helping the team to get better and being exposed to performing at that level. Performing individually is one thing, but performing as a team is another. I learned so much and I enjoyed working with our coaching staff to make this Interski a success.

### **Our Team**

We have a young team of very hard-working individuals that are truly inspiring. They all have another career outside of skiing and fitting an Interski year with their real job is very challenging. I am very impressed with each one of them. Their dedication, desire to be the best they can be, hard work is inspiring.

### **Interski**

We can be proud of what we achieved at Interski. First, we had so many great comments from other teams about our skiing and teaching and most importantly, about the positive attitude of our delegation. I am also very impressed with the indoor content delivered by our former Coach, Jeff Marks and our former Managing Director, Perry Schmunk. We had a lot of great comments about that. Jeff and Perry were involved in the commenting of the night shows and did an incredible job.

### **Technical Comparison Runs**

All our demo runs are important. The highlight for me was definitely the technical comparison run we organized on the last afternoon. We invited some countries on the

pitch of the SL World Cup run for some short turns. It was steep, the conditions were challenging, and you need to make Canada proud. Those moments are super special.

## **The Exchanges**

What I like the most about Interski is all the discussion we had with other countries on snow, in the indoor lectures, at lunchtime etc. This is gold. It is amazing to have the chance to present what we do and get feedback about it and learn from what the best are doing. This is the recipe to grow our organization and benchmark ourselves with the best in the world!

## **Benchmark with the best - Interski 2023**

### **The Edge Release**

When I was younger, I used to think a lot about cranking turns and increasing the angle as much as possible. What I realized over the years is that incredible skiers have one thing in common: they are releasing the edges very precisely.

Physics tells us that to be efficient, you want to increase the edge before the apex of the turn and decrease the edges after the apex. This will allow no interruption in flow. In order to achieve that, the best skiers in the world are controlling the release of their edges very precisely. What we see with the top skiers:

- A flexing of the old outside leg to release the edges. (Canada, Australia, New Zealand, Japan, USA, Switzerland, Denmark, Chile, Argentina)

- This flexing is very progressive and allows the skier to keep turning even if the edges are decreasing. The stronger the skier, the more precise the edge release is.

- The outside leg is shorter at the edge change and longer at the apex.

- The future inside ski is tipped towards the pinky toe edge before the outside ski, this will allow the skier to change the edge underneath his body vs when the skis are casting away from him.

- During the edge change, we see the top skiers active on the fore and aft plane (Pitch) to engage the tip of the ski at the top of the turn. (USA incorporated this topic as part of their Fundamentals) The stronger skiers slow their base of support down (pull feet back) in transition in order to recenter more effectively vs moving their Center of Mass (Australia, Canada, USA)

-As a result of those moves, the COM has very little up motion in the transition, and we see a cross under motion vs a cross over from the top skiers. So stronger skiers guide their base of support to cross underneath their center of mass in transition.

In summary, the skier releasing the edges late in the turn and quick will result in the COM being pushed up and inside of the next turn which result in a lack of grip and shape at the top of the following turn.

We see top skiers executing very precise movements to control the release portion of the turn which set them up for greater ski performance on the first half of the following turn.

### The Edge Increase

-If we look at the sequencing of movements of top skiers, we see one key element with all of them: they are changing the edges before changing the direction.

-In order to achieve this, the inside ski is tipped towards the little toe edge before the outside ski. There is a perception and reality game here. In his mind, the skier focusses on changing inside edge before outside edge, but in reality, what you see as an observer is both edges changing at the same time.

-Your feet are the base of the kinetic chain. Everything happens from the ground up. (Canada)

-(Japan) was very picky on basic stance and spent a lot of time on the details:

- Proportional bending at ankle, knee, hip.

- Hinging at the hip in order to have a neutral spine

- This will allow full range of motion laterally and rotationally of the legs turning in the hip sockets



Photo credit: Tom Gellie

-Once you find this alignment, you do not unbend the joints too much in order to keep your Center of Mass traveling forward along the length of the ski (Canada, USA, San Marino)

-The truth is, regardless of what part of the world you are from, everybody lines up similarly when they approach the apex of the turn. There are not many options to be in proper alignment under load. The alignment above offers a good foundation to develop power, precision, and skiing without injury.

-Once we have a skier who maintains strong alignment, in the edge increase part of the turn, we also see most top countries being active on the fore and aft plane, and we have some data to prove it:

-(Germany) did a study with their junior racers vs world cup racers. They measured where is the balance underneath the foot on the fore and aft plane during the turn. The result shows that the world cup racers use a lot more fore and aft balance during the turn vs the junior racers. They enter the turn more on the front of the foot and are on the heel by the apex.

-What we learn from this: Manipulating where your weight is on the ski can turn the ski on the surface of the snow as a result. So, if a skier is moving along the length of the ski at the top of the turn to engage the tip of the ski, the tail of the ski gets lighter and turns. (Korea, Japan, Canada, USA, New Zealand, Australia)

- Edging the skis will slow the speed of your feet down as your edges penetrate the snow, you need to accelerate your base of support to stay balanced. (Canada)

-In order to stay balanced while the skier is active on the fore and aft plane, we engage the anterior tibialis muscle. This is done by lifting the toes up. This will offer more stability in order to keep the ankle flexion while having the balance on the front of your foot at the top of the turn and towards the back of the foot at the apex. (USA, San Marino)

-We see top countries using less separation on the first half of the turn to allow more range of motion with ankle and knee laterally. The squarer stance will also help the skier being more active fore and aft (Switzerland, Japan, Denmark, San Marino, USA)

-The separation will appear on the second half of the turn and will be created by the skis turning underneath you.

-Balance on the outside ski is a result. When you drive your car, you turn left and the Kleenex box on the dash of the car will go right. We see the same effect in skiing: you do not physically change your balance, the skis turning underneath you will move your COM towards the outside as a result. (San Marino, Canada)

-The amount of angulation you have in Intermediate Parallel is the same vs in expert parallel. The degree of inclination will change as the speed increases, but the angulation remains the same (Australia)

-The key is to be angulating vs being angulated. The first option is a progressive motion and links with the size of turn you make. The second option is a placement of the joints that favorize form over function. (Canada)

-Angulating from the lower joints will allow you to keep a neutral spine which will protect your back under load vs skiers moving inside of the arc too much with their upper body cannot use the lower joints to angulate, so they force the upper body to bend sideways to create that C shape thinking that this is angulation... This motion is very dangerous for your back. (Canada)

-The best skiers are showing speed control happening before the apex of the turn using the soft edging concept.

-By entering the turn on the front of the ski, it gets the tail of the ski to swing outward and skid a little before the ski carve. This is how the speed is managed early into the turn. This will leave a half-moon track on the snow. The best skiers can control the width of the track making it a Quarter moon, half-moon etc. depending on how much they want to reduce their speed before the apex. (Canada, Japan)

### **Teaching concepts**

(USA and New Zealand) are using DIRRT concept in order to offer more measurable outcomes when you teach a movement.

- Duration

- Intensity

- Range

- Rate

- Timing

This is a good opportunity for us to standardize our approach when we are introducing a task in our system. Using a similar concept systematically would clarify our tasks set up.

(USA) have been working with their 5 fundamentals to describe the key movements with their skiers. We are looking at how we can integrate a technical reference to our Skill Framework in order to clarify the key movements we are after to develop skiers in Canada.

We are also looking at combining our 3 skills inside our Skill Framework in order to improve the integration in our material.

