My SRT/SRS (R)Evolution!

BY CHRIS GIRARD

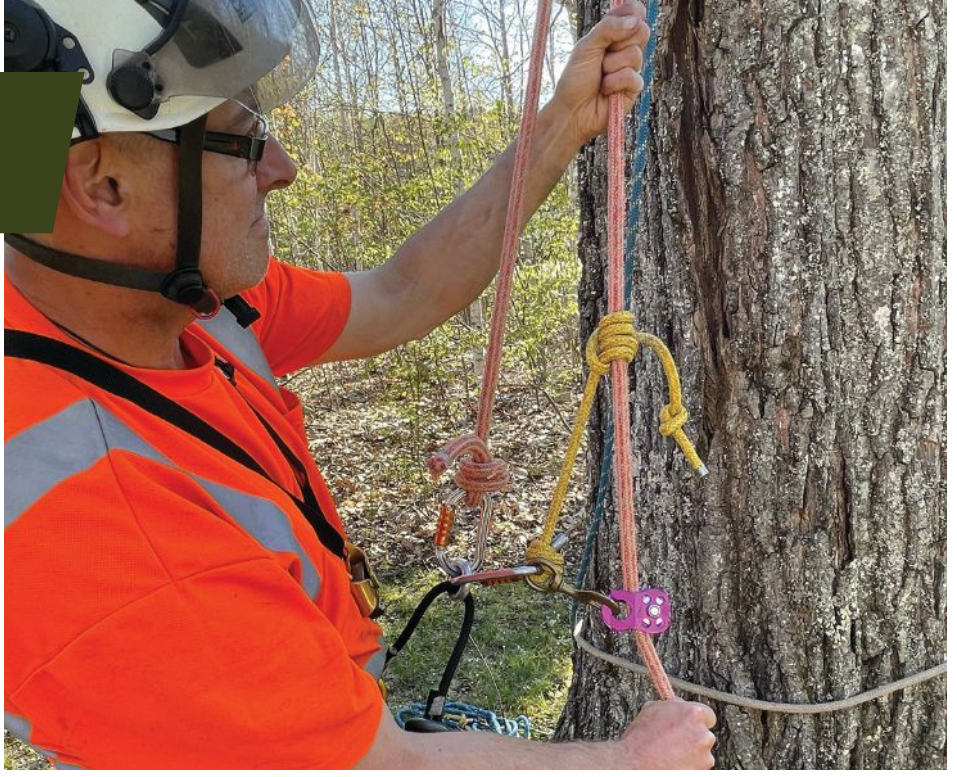

Photo 1: The author employs a split-tail climbing system. Unless otherwise noted, photos by Rebecca Gard, courtesy of the author. In the photos with this article, the author is shown inspecting his climbing system prior to ascent, and for that reason has not yet lowered his Z87-approved visor.

Wow! Authoring an article about single rope technique (SRT) – where to begin? I guess the first thing would be to explain the reason behind the title, then describe some of the many fabulous developments I have had the privilege to see and be involved in.

First, I want to say a few things about the nomenclature of this particular climbing technique. The term SRT has been around for decades in mountaineering, caving, rock climbing and then industrial-rope-access work. A few years ago, when it started to become more popular in the tree care industry, some well-intentioned leaders of our industry felt this acronym was not particularly suited to our line of work.

This was because, in tree work, we also use a single rope for other climbing methods, such as DdRT (doubled rope technique), and then also may use a second rope for DRT (double rope technique). It was confusing, and we needed to simplify our terminology.

The new acronyms decided upon are SRS (stationary rope system) and MRS (moving rope system). I personally do not use these terms, because there is nothing stationary about SRS except the fall of the line (standing part) from your anchor point in the canopy. While climbing, the lead portion (working end) of your line is constantly in motion and moving around. So technically, the SRS technique is also an MRS technique.

I am also a SPRAT (Society of Rope Access Technicians) trained climber, and since they use the term SRT, I will continue to do so as well. Therefore, for the purpose of this article, the reader can consider SRT to have the same meaning and use as SRS, and DdRT to be the same as MRS.

The reason I used "(R)Evolution" in the title is because in the last 10 years, the industry has seen both a revolution and evolution in climbing techniques that has never – in its more than 100 years – been seen before. It truly has been an incredible time to be involved in tree work, and climbing in particular.

I turn 56 this year, and have been a climber literally since I was able to crawl. My mother likes to tell the story about when, as an infant and learning to move about, I would be found on top of my dresser, having climbed out of my crib and onto the side of the dresser. It got so bad that she had to tie a fishing net over the top of my crib to stop my adventurous baby ascents into the unknown!

When I became a tree climber years later, I started out like everyone back in "the good old days," climbing DdRT. I used a traditional (closed) climbing system with a taut-line hitch as my attachment knot. It did not take me long to switch over to a split-tail climbing system, with a micro pulley and Blake's hitch attachment knot. (Photo 1)

Always inquisitive, I followed the industry closely and kept up with what was happening in the climbing world. I vowed I would learn all I could about proper tree care and climbing, and become a certified arborist as I gained more experience. Living in New Hampshire, I was lucky enough to learn that the National Arborist Association (now TCIA) headquarters was less than an hour away from where I lived, and that they put out a monthly publication called *Tree Care Industry Magazine*. I subscribed and devoured every climbing article I could find.

Ascending the canopy back then certainly was not what it is today. We either footlocked, body thrust or, if it was a removal, spiked up the tree. Occasionally, we would use a ladder to begin our ascent and then switch to an alternate lanyard technique (ALT) until we reached our TIP (tie-in point). Having by then

Photo 2: European frog-walker system.

given up my childhood climbing methods, I always stayed 100% tied off.

Having a love for all forms of climbing, I followed what was happening with climbers in mountaineering and caving (spelunking) and noticed how efficiently they were able to ascend and descend using mechanical devices. Knowing how inefficient footlocking is from an energy standpoint, I decided to use SRT caving techniques to ascend the tree and then switch over to my usual DdRT work-positioning system. I have since learned from SRT pioneer Tom Dunlap that other tree climbers also were using this method, and were calling it a "single-up, double-down" procedure.

I chose the European frog-walker system for its ease of setup and smooth ascent style. (Photo 2) Cavers had been using this system since Fernand Petzl started making mechanical ascenders and descenders in the 1960s, and the first ascender, the Jumar, manufactured by Jümar Pangit, came on the market in 1958. My frog-walker system consisted of a 7/16-inch (11mm) kernmantle rope (important for low elongation), hand ascender (with a tether secured to my harness bridge), chest ascender and foot ascender. This system was a variation of the "sit, stand" method of ascending, also known as the Texas climbing system (for a full description of both systems, see chapter 7 of TCIA's "SRT Best Practices for Arboriculture" manual).

The benefits of using the frog-walker system were immediate. It was a very compact system without a waste of energy (known in the climbing world as an "energy leak"), like I used to have with the footlock. The chest ascender also allowed me to keep a more upright climbing position on the line, which, again, added to the efficiency of the system.

One thing I always made sure to have with me while ascending was a way to descend in the event of an emergency. While many kinds of mechanical descenders were on the market at the time, I settled on the simple, trusty figure-8 descender, with a Prusik loop backup set above. (Photo 3)

I would ascend on the frog-walker system, keeping my DdRT (split-tail system) clipped to a side D-ring on my harness. When I reached my TIP, I would just move my split-tail climbing system over to my bridge and do a changeover. I was then ready to begin work. I could leave the SRT line in the tree if another climber wanted to ascend, or just lower it back to the ground.

Remember, at this time there was no such thing as a multiscender tool like we have today, that allows you to ascend and descend as well as work off of an SRT line. The Unicender, developed by mechanical-tree-tool genius Morgan Thompson of Thompson Tree Tools in Ithaca, New York, was still a ways off. There were tools in the industrial rope-access world that I tried, such as the Petzl Grigri. This did allow me to work and descend SRT, but

Photo 3: Figure-8 descender with Prusik loop backup.

Photo 4: Frog-walker-moving-false-crotch system.

it was not very conducive to the movements tree climbers encounter in the canopy on a daily basis, plus you always had to do a changeover from ascent to descent/work position before beginning your vertical tasks.

So I worked with my frog-walker changeover system for quite a while before finding my next (r)evolution. The day I opened the April 1995 *TCI Magazine* and read the great Jeff Jepson's article, "A New Climbing Technique," I thought I was in climber's heaven! Jeff called this new technique single rope climbing, or SRC for short. (Available in the *TCI Mag* archives at tcia.org/TCI-publications/tci-magazine/pdfs/04-1995-TCI-Mag.pdf.)

As stated in the article, there are many variations of this technique, but the one I found most useful and next incorporated into my climbing system was a combination I called the frog-walker-moving-false-crotch system. (Photo 4) I could not find an acronym that would work for this technique!

With this system, your SRT line acts as a moving false crotch while you are working in the tree. The SRT rope is anchored to the base of the tree, using whatever basal anchor system you choose. I used a mini Port-A-Wrap with a Prusik backup. (Photo 5) This allowed my ground workers to lower me in the event of an emergency. They were all used to using a Port-A-Wrap, so there was no need to

Photo 5: Mini Port-A-Wrap with a Prusik backup.

learn some new lowering system. One trend I saw when SRT was first making its appearance was the use of unnecessarily complicated lowering systems.

I would ascend using the frog-walker system, but with the moving false crotch, which was also my DdRT split-tail system, attached to my harness bridge and the lower hole on the handled ascender. My split-tail system would consist of a ½-inch, 24-strand climbing line attached to the bottom of the hand ascender with a micro-pulley and Delta screw link. I used an 8-mm split-tail cordage tied off with a Blake's hitch. I also attached a split-tail backup above the hand ascender as security for when I would be working off the hand ascender.

The beauty of this system is that at any time during the ascent, you can stop and change over to your DdRT system, limb walk, work the tree and then return to SRT and either continue ascending or descend back down easily and efficiently. I used this system for a number of years and was incredibly happy with its performance.

The tools

Being a long-time member of the online tree care forum TreeBuzz.com (having joined back in 2003) allowed me to watch and learn what other open-minded climbers were doing in our industry. ITCC World Champion Mark Chisholm and climber Tom Dunlap have done such a great service in helping us spread the word about new innovations through their online forum that we all owe them a great deal of thanks for their contributions to our industry.

Around 2005, Dunlap started talking about a great tool for working the tree in SRT mode called the Unicender. In what can only be described as divine intervention/fate, Dunlap happened to see Morgan Thompson at a TCI EXPO with a prototype of the Unicender hanging from a line. Being the inquisitive climber he is, he went over to investigate this odd-looking mechanical wizardry. Dunlap immediately saw the potential of this unique tool and, with the TreeBuzz forum, was able to spread the word online. This, to me, is where the SRT "revolution" had its beginnings in the tree-climbing world.

This tool allows a climber to ascend, work the tree and descend all on one line, without having to do a changeover to a different climbing system. The Unicender acts as a mechanical hitch, and can easily be attached midline in either an SRT or DdRT system.

Fast forward a few years, and again SRT history was made. The venue was the 2010 Pittsburgh, Pennsylvania, TCI EXPO, and I had the honor of assisting Dunlap in the first SRT demo TCIA had on the trade-show floor. After our presentation, Dunlap invited Kevin Bingham, another SRT pioneer, to come up on stage and demo a new tool he had invented and was calling the Rope Wrench.

Bingham's original Rope Wrench was, literally, a carved piece of wood with holes in it that the rope went through. It was shaped like a wrench and created a bend in the climbing line. When connected to your climbing hitch, this tool would add friction above and lessen the friction below, at the hitch, allowing the climber to move easily up and down the line in an SRT mode. In a sense, it created a kind of DdRT system similar to my moving-false-crotch system, but was much less complicated.

Surprisingly, it took a long time for climbers to understand the simple physics behind the Rope Wrench and to fully grasp the concept that it was safe and provided potential for use in the canopy that we had only previously seen with the Unicender. Luckily, there were people in the audience who understood what they were seeing and got on board with Bingham and the Rope Wrench. I am proud to say that I am an owner of an original ZK-1 Rope Wrench made by Bingham and his company, Singing Tree Rope Tools, in Detroit, Michigan, as well as a ZK-2 Rope Wrench. (Photo 6)

Once the Rope Wrench took off, it went worldwide. It became so popular that

Photo 6: Rope Wrench evolution.

Photo 7: Singing Tree's Rope Runner.

Singing Tree had to have outside help to keep up with demand. Bingham teamed up with the North Wales company International Safety Components (ISC), which now manufactures the Rope Wrench and continues to put out a first-rate piece of gear.

Never one to rest on his laurels, Bingham next produced another multiscender tool that he called the Rope Runner. This 100% mechanical device works well in both SRT and DdRT mode and performs similarly to the Unicender. It is great for commercial work, because it is compact and easy to use and the parts can be replaced after they wear out. Of course, being the gear junkie that I am, I had to have one and try it out. After experimenting with different ropes to see what worked best for me, I was able to add another climbing system to my collection. (Photo 7)

Shortly after Bingham's Rope Wrench made its debut, another SRT pioneer introduced another incredible mechanical wonder in 2012. Once again, thanks to TreeBuzz, we found out about Paul Cox and his Hitch Hiker SRT tool. Cox is an arborist who started working in trees in 1988 in England and relocated to the U.S. He owns and operates a tree care service and a tree tool company called RopeTech, in the beautiful rolling hills of Virginia.

Cox is also the inventor of the Rope Wraptor gas-powered ascender. This tool will effortlessly put a climber up in the tree, as well as prolong one's career in the tree care industry. One of his greatest contributions, and one for which he is not given the credit he deserves, is his introduction of the Sena Bluetooth helmets to the tree care industry. These really were, and still are, a game changer, and anyone who has ever done crane work with one and then without one really knows what we were missing.

I could go on and on about Cox, but let me tell you a little about his Hitch Hiker SRT tool. Back in 2012, I was lucky enough to be involved in the review of TCIA's original "SRT Best Practices for Arboriculture" manual, an industry first. Donny Coffey, CTSP and owner of Nature's Canopy in Tyrone, Pa., and Tchukki Andersen, CTSP, BCMA and TCIA staff arborist, worked extremely hard on this manual to bring us the information involving SRT that was starting to pour out worldwide on the climbing scene.

At that time, having known Cox for a number of years, I asked him if he could send me a prototype of the Hitch Hiker to try out and include in the manual. Cox graciously sent me one, and I was immediately impressed with it! It is a compact multiscender tool that allows a climber to ascend and descend easily, and also works great in SRT and DdRT mode. It incorporates a friction-hitch cord wrapped around an ingeniously designed aluminum "heat-sink" friction device. (Photo 8)

By this time there were so many diverse types of multiscender devices out there that I thought there could not be anything new coming out. Then I heard the hype about the Akimbo and decided to try it. Rock Exotica took arborist Jamie Merritt's unique multiscender tool and made it available to the climbing world. (Photo 9) It, too, works along the same

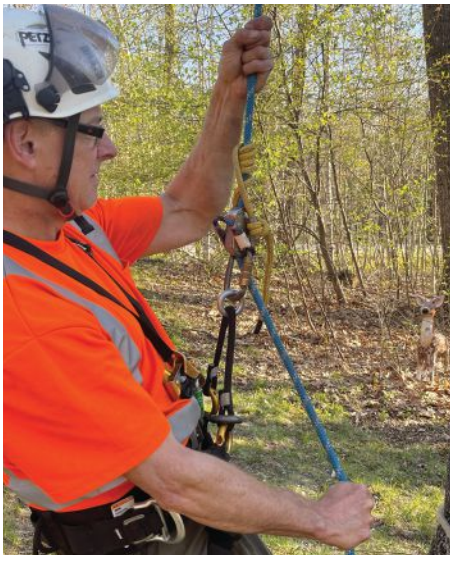

Photo 8: The Hitch Hiker.

Photo 9: The Rock Exotica Akimbo. Photo courtesy of Philip Ruiz.

lines as the Rope Wrench and Rope Runner, creating bends in the climbing line and adding friction to a mechanical SRT device. It also can be used in DdRT mode. I honestly do not feel I gave it enough time to dial in which lines and settings worked best for me, so for now I have set it aside. I do know there are countless climbers out there who swear by it, so it just goes to show there is an SRT system out there for everyone!

After the Akimbo, I really did not want to try anything else out. I had a number of different SRT and DdRT climbing systems, and I would climb on one until I got bored and then switch to one of my other systems. I kept hearing about the combo of Petzl's ZigZag and its new Chicane, but being a loyal supporter of Bingham, I thought Petzl had just ripped off the Rope Wrench design. Then, around 2020, I thought, "What the heck, I'll give the Petzl SRT combo a try." (Photo 10)

Well, I could not have been more wrong about it! The Petzl Chicane, though similar in design and function to the Rope Wrench, is really designed and tested to work in combination with the ZigZag. It is larger and not as compact as the Wrench, and can be difficult to open one-handed, but the ascent and descent are really incredibly smooth. The Chicane can easily be removed, allowing the ZigZag to be used in DdRT mode. I do not look at it as a rip-off of the Wrench, but as a modification to a design, similar to the way people modified the first chain saw to make improvements to it. The Petzl combo is currently my daily climbing system for both SRT and DdRT.

I climb SRT 100% of the time, unless I am doing a crane removal. I forever gave up the body-wrecking footlock technique that for so long ruled the industry. I know there are some climbers who still like to footlock, but all I can say is, try doing that daily at 55 years old and see how long you last!

Photo 10: The Petzl ZigZag and Chicane.

We have many great, ingenious tree climbers out there to whom we owe a world of gratitude and who I am happy to call friends. I also am proud to have been a pioneer in SRT tree climbing, helping spread the word about this fantastic way to climb. I eagerly await the next game-changing (r)evolutionary system. Until then, climb on and climb safe!

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Best Practices for SRT in Arboriculture

Stationary Rope Technique (SRT) for tree climbers is a simple method of tree access and work positioning that can add hours of productivity to a work week. The 2nd Edition of SRT Best Practices includes updated photos as well as a printed and digital (CD) directory of SRT-compatible climbing equipment and equipment suppliers. Scan the QR code to view this product in TCIA's online store.