

Prologue

Bryan Orville stood at the podium on the portable stage that had been set up an hour earlier in a cordoned-off corner of the main student parking area. Sitting on folding chairs behind him were a handful of local luminaries, including the mayor of Rawlins, the university president, the provost, the engineering dean, and a senior engineering professor. As the mid-afternoon sun slipped behind the skybox on the west side of Cougar Stadium, a shadow crept toward the back of the stage.

Tall and slender, Orville wore his usual outfit of blue jeans, cordovan penny loafers without socks, white silk crewneck shirt, and navy nylon jacket with the Syclone Systems corporate logo on the chest. With his two-day stubble and thick, wavy chestnut hair touching his collar, he looked younger than his forty-five years.

He had just begun his remarks thanking Central Montana State University for hosting Syclone for the year; the university and the robotics company from Mountain View, California, had teamed up to research autonomous vehicles. He placed his palms together in a Namaste gesture and bowed his head slightly to acknowledge applause from the audience of almost a hundred seated on the aluminum bleachers twenty yards away.

Even though the audience had greeted Orville warmly and were listening politely to his remarks about the team's accomplishments, they hoped to hear him announce that Syclone had decided to award the university a Syclone Autonomous Vehicle Institute designation. If the company awarded the university what everyone in the small city was already calling a SAVI, the university could anticipate a prestigious partnership with the high-tech company that would yield millions of dollars of revenue—and dozens of jobs for professors, students, and technicians from the community—for many years.

Orville continued. “What we have accomplished together this year—Syclone and Central Montana State University—has contributed to an initiative that will fundamentally change the world. Imagine a world in which car crashes decline by ninety percent, driving-related energy consumption and air pollution drop by a third, and commuting times decrease by half—enabling you to work, read, or relax during your morning commute.

“In this world, the car will deliver you to your destination, then drive itself back to a remote

parking area, freeing up valuable downtown property that is now wasted on ugly parking lots. In fact, most of you will choose not to own your own cars because ride-sharing services will be cheaper, more convenient, and simply more fun than owning your own vehicle. People with disabilities, including blindness, will be able to use cars to get around.

“These are just a few of the more-obvious advantages that self-driving cars will afford all of us. And I am absolutely certain that, once these vehicles become commonplace, which will happen in less than a decade, we will begin to see enormous benefits that we cannot yet even imagine.”

The shadow cast by the stadium had now touched the rear of the stage on which Bryan Orville stood. “But I’m sure you didn’t come out on this beautiful Montana afternoon to listen to some guy from California talk your ears off. I bet you want to see a little bit of what your Central Montana State University team has accomplished this year.”

The people in the stands straightened up, eager to watch the demonstration. “You see that red Prius over there?” He pointed to a corner of the condoned-off area some hundred yards away. “That’s just another Prius . . .” He paused for dramatic effect. “Except that it isn’t at all just another Prius. It’s a fully autonomous vehicle. I won’t bore you with the technical details of the modifications the team has made. But if you look at the pavement in front of the bleachers, you’ll see a bright yellow line. We painted that line this morning. In just a moment, we’re going to instruct the car to drive over here by following the path of that line.

“Now, you’ll notice that the line snakes around quite a bit. We did that on purpose, to show you how precisely the car can follow the curve. In the real world, there will be all kinds of information that the car needs to process. There will be weather conditions—rain, fog, dust, and snow—that make it difficult to navigate. And there will be other cars and pedestrians and animals that the car must navigate around. For this reason, the car is equipped with a vast array of complementary technologies that enable it to stay in its lane, respond effectively to changing conditions, and safely deliver its passengers to their destination. But for our little demo today, we’re going to show you only one technology: the ability to stay in a lane by using the visual input of lane markers on the street.”

Orville looked up at the audience in the aluminum bleachers. “Okay, are you ready?” He glanced at a group of teenaged boys who had risen to their feet and were pantomiming rushing down the aisle to get away before the Prius plowed into the bleachers, killing them all. Orville

gave them a broad smile. “Guys, I think you’re going to be all right. We tested the system five times this morning.” He paused for effect. “First couple times—okay, there were a few fatalities.” The crowd in the bleachers laughed at his joke. “The last three times, though, it worked like a charm.”

He stretched out his arm, palm up, toward a young woman and a young man seated at a folding table off to the side of the bleachers. “Morgan,” he said to the young woman, “are you ready?”

She nodded, smiled, and hit a few keys on her laptop. The red Prius began to roll silently at about ten miles per hour, following the curve of the yellow line.

Bryan Orville stepped out from behind the podium and strode confidently to the edge of the stage. He hopped off the stage and put on a headset microphone. He walked to the area between the stage and the bleachers, where the yellow line ended. Suspended on poles that would hold a badminton net, a big blue banner reading *Syclone Systems* fluttered in the gentle May breeze. Bryan Orville stood in front of the banner, waiting for the Prius to arrive.

The car, now traveling fifteen miles per hour, was fifty yards away. Bryan Orville planted his feet squarely and lifted his arms in a welcoming gesture. Smiling broadly, he spoke into the microphone. “Come to Papa.”

The people in the stands turned their heads toward him and smiled. Then they looked back toward the Prius approaching him, the sun reflecting off its windshield.

In a moment, the smiles began to slip off their faces. The Prius, now only twenty yards away, wasn’t slowing down.

Morgan, the young woman with the laptop, looked down at the screen, then up again at the approaching car. She and the young man sitting next to her, Walt Danielson, started pounding at the keyboard, but the car didn’t stop.

Morgan’s eyes widened, her eyes focused on the screen, then over at Bryan Orville, then at the Prius. Walt Danielson had risen half out of his seat, straining as he leaned in over the laptop, trying to understand what was happening. People in the audience stood and shouted for Bryan Orville to get out of the path of the car. The car kept coming. Bryan Orville held his smile, his arms outstretched, his feet planted on the pavement.

Only after another second, with the Prius bearing down on him, did his smile disappear. His arms sank to his sides, and he tried to move. But his legs seemed frozen in place. As the Prius hit

him, he appeared to crouch down, as if he could somehow escape.

There was a muted thud, and the red Prius bucked and shuddered momentarily as Bryan Orville disappeared under its chassis. The car dragged his body as it tore through the *Syclone Systems* banner, finally coming to rest twenty yards farther along.

The dignitaries on the podium rushed down the three steps and over toward the Prius. People in the bleachers were screaming, covering their faces in horror, dialing 911, and taking cell-phone photos and videos. The bleachers rattled and clanged as people hurried to the aisles and clomped down the stairs and onto the pavement to see if they could help Bryan Orville.

Walt Danielson grabbed the laptop just as Morgan, screaming, leapt to her feet, knocking the portable table on its side. Walt stared at the laptop, his jaw slack as he tried to understand what had just happened. Morgan ran over to the Prius. In an instant she was on her belly on the pavement, crawling under the car, as if she could pull Bryan Orville uninjured from under the chassis.

People crowded around the car, waiting for Morgan to emerge from underneath and tell them what to do. When she did emerge, her face was contorted in terror, tears streaming down her face. She began to push on the driver's door, rocking the car, and screamed for the others to help her. In an instant, a dozen people leaned into the side of the car and began to rock it in rhythm. The driver's side lifted into the air, and the Prius came to rest momentarily, balanced on its two right wheels. Morgan and the others gave it one final push. It tipped and, with a crash of glass and crumpling metal, rolled onto its right side.

When the crowd saw Bryan Orville's body on the pavement, they let out a final gasp and, once again, began to scream in horror.