History

SECTION 1: Laying the Foundation

SCENE SETTER

We're at the brink of a new millennium, and looking into the future can be disorienting. So much has changed in just this century; what changes will the future bring? In the last few decades alone, advances in information technology have revolutionized work, just as eighty years ago Henry Ford revolutionized manufacturing. These advances have created a global economy, whi has transformed the way that we look at our markets and loosened the once-rigid hierarchies of business and social convention.

But if you think we're in the middle of extraordinary and unprecedented change now, think back the cusp of the twentieth century, when the internal combustion engine was just one of the man ways that the accepted practices of life were being turned upside down.

Communication was being transformed by improvements to the telephone and the wireless. Sound could be captured by the phonograph, and memories saved by Kodak's first hand camer The first public motion picture was shown in Paris in 1895, the same year as the first safety razc was produced, revolutionizing the world's grooming habits.

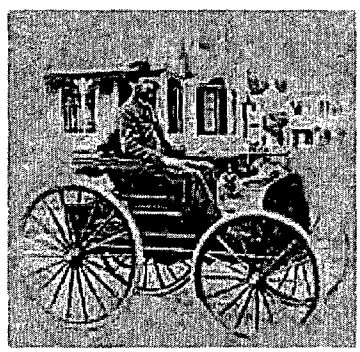
And that was not all.

A.P. Warner, founder of Warner Electrics and one of the founders of Dana, liked to tell the story a lecture he once attended. The lecturer, a learned Harvard mathematician, proved conclusively on his blackboard, through a combination of diagrams and equations, that flight in a heavier-tha air machine was a mathematical impossibility.

Shortly afterwards, Warner became only the sixth American to fly such a machine. The unimaginable can become the everyday, almost overnight, and we have to be ready for it, as ou founders were.

1st vignette

The motor car and power transmission



In 1902, at Cornell University's Sibley College, a young stude of Mechanical Engineering named Clarence Winfred Spicer w assigned a project that had intrigued some of the finest scientific minds in history -- to design a self-propelled carriage or automobile. Plans for such a vehicle had been drawn by bc Leonardo da Vinci and Isaac Newton, while the first road teste steam vehicle was built by Louis Cugnot in the 1760s.

But it was in 1886 that the modern automobile was born, as Gottleib Daimler developed a practical internal-combustion engine, and his German contemporary Karl Benz integrated a