

Does the statement, "We've always done it that way" ring any bells...?

The US standard railroad gauge (distance between the rails) is 4 feet, 8.5 inches. That's an exceedingly odd number.

Why was that gauge used? Because that's the way they built them in England, and English expatriates built the US Railroads.

Why did the English build them like that? Because the first rail lines were built by the same people who built the pre-railroad tramways, and that's the gauge they used.

Why did "they" use that gauge then? Because the people who built the tramways used the same jigs and tools that they used for building wagons, which used that wheel spacing.

Okay! Why did the wagons have that particular odd wheel spacing? Well, if they tried to use any other spacing, the wagon wheels would break on some of the old, long distance roads in England, because that's the spacing of the wheel ruts.

So who built those old rutted roads? Imperial Rome built the first long distance roads in Europe (and England) for their legions. The roads have been used ever since.

The ruts in the roads? Roman war chariots formed the initial ruts, which everyone else had to match for fear of destroying their wagon wheels. Since the chariots were made for Imperial Rome, they were all alike in the matter of wheel spacing. The United States standard railroad gauge of 4 feet, 8.5 inches is derived from the original specifications for an Imperial Roman war chariot. And bureaucracies live forever.

So the next time you are handed a specification and wonder what horse's behind came up with it, you may be exactly right, because the Imperial Roman war chariots were made just wide enough to accommodate the back ends of two war horses.

Now the twist to the story... When you see a Space Shuttle sitting on its launch pad, there are two big booster rockets attached to the sides of the main fuel tank. These are solid rocket boosters, or SRB's. The SRB's are made by Thiokol at their factory at Utah. The engineers who designed the SRB's would have preferred to make them a bit fatter, but the SRB's had to be shipped by train from the factory to the launch site. The railroad line from the factory happens to run through a tunnel in the mountains. The SRB's had to fit through that tunnel. The tunnel is slightly wider than the railroad track, and the railroad track, as you now know, is about as wide as two horses' behinds.

So, a major Space Shuttle design feature of what is arguably the world's most advanced transportation system was determined over two thousand years ago by the width of a horse's behind. ... And you thought being a HORSE'S BEHIND wasn't important!