Conclusions of Special Theory of Relativity

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The constancy of the speed of light is not an incomprehensible paradox. It is based on the principle of the homogeneity and isotropy of 3-dimensional space, and on the definition of time as the display of a clock. It remains to define the clock, which is done by introducing a theoretical clock, the light pulse clock. The constancy of the speed of light can be demonstrated from here. Two observers, in relative motion with respect to each other, measure the same speed for a light signal. How is this possible? "Everyone can see that this is absurd." It is not absurd at all, and it is explainable because the observers each possess a clock, and they are synchronized according to the definition of time. They indicate different times, and each observer measures the speed of the light signal by the time displayed by his own clock. The phenomena described and explained by Einstein can be intuitively understood through animations. We reduce the lengths, times and speeds and draw an animation of the phenomenon. Real light now has, for all practical purposes, infinite speed, and allows us to follow the phenomena in animation. We see different clocks in motion, indicating different values for their own time. This is imposed by the way the clocks are synchronised, because we do not have an infinite speed of observation on the scale of the universe.