

Case(1) and Case (2) describe the same event.

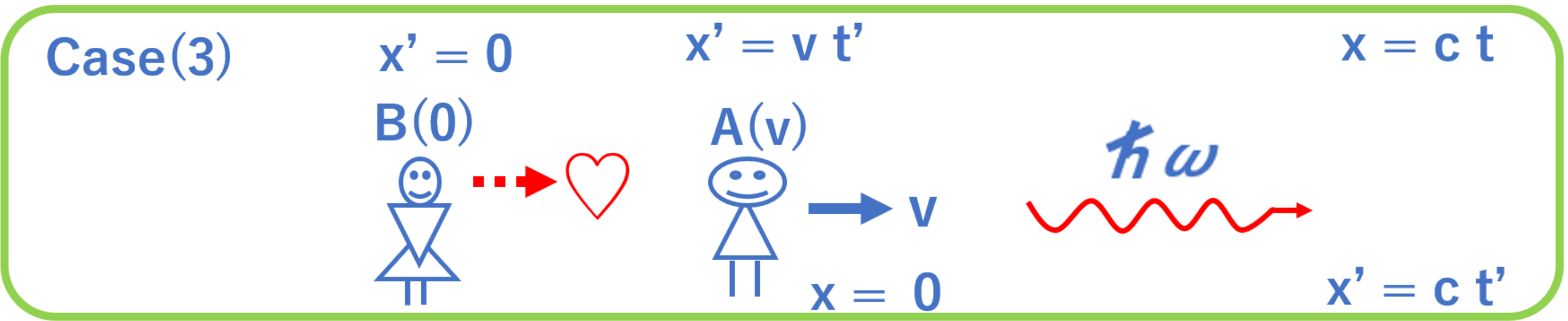
(10)

For Case(1) and Case (2) event

$$x' = \beta (x - vt)$$

$$t' = \beta (t - vx/c^2)$$

Case (3) is a different event from Case (1) and (2).



(11)

For Case(3)

$$x' = \beta (x + vt)$$

$$t' = \beta (t + vx/c^2)$$

(12)

For Case(1) and Case (2) event

$$x = \beta (x' + vt')$$

$$t = \beta (t' + vx'/c^2)$$

.....→
 Exchange A and B
 to get Case(1) event