An Introduction to Mathematics in LaTeX

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1 Introduction

Writing out a fixed-length sequence of move symbols can be tedious, so we introduce a shorthand for specifying the number of successive touch-move events using the notation

EQUATION HERE

which generates the expression that matches t_1 to t_2 successive EQUATION events. The t_2 parameter is optional. Proton++ expands the shorthand into t_1 consecutive move symbols if t_2 is not specified. It generates the disjunction of t_1 consecutive move symbols to t_2 move symbols if t_2 is specified. For example, a touch and hold that lasts at least five consecutive move events is expressed as EQUATION, which expands to EQUATION. A tap of one to five move events is expressed as EQUATION, which expands to EQUATION. We also update the tablature with timing notation as shown in Figure 11a. The developer can specify a range t_1 to t_2 within the gray move nodes.

Here are some examples of equations:

$$coverage(t_i) = |\mathscr{R}(t_i)| - |\mathscr{R}(t_i) \bigcap \mathscr{R}(T_r)| \tag{1}$$

$$cost(t_i) = time(t_i) \tag{2}$$

$$ratio(t_i) = \frac{coverage(t_i)}{cost(t_i)} \tag{3}$$

$$D(\tau) = \sum_{\lambda \in \Lambda(\tau)} \sum_{\rho \in R_\lambda} (\rho - \mu(R_\lambda))^2 \tag{4}$$

$$\mu(R_\lambda) = \frac{\sum_{\rho \in R_\lambda} \rho}{|R_\lambda|} \tag{5}$$

Can you create your own LaTeX document to rewrite some of the content in the Proton++ paper?