

es-msgs^{0,22}

$\text{msgs}(l; \text{before}(e')) \equiv_{\text{def}} \text{map}(\lambda e. \text{emsg}(e); \text{rcvs}(l; \text{before}(e')))$

clarification:

$\text{es-msgs}(\text{the_es}; l; e') \equiv_{\text{def}} \text{map}(\lambda e. \text{es-msg}(\text{the_es}; e); \text{es-rcvs}(\text{the_es}; l; e'))$