

union-decodes^{11,40}

$[R \text{ ? } \text{decodes}_1 : \text{decodes}_2](i, e, st)$
 $\equiv_{\text{def}} \text{if } p:R(i, e) \text{ then } \text{decodes}_1(i, e, st) \text{ else } \text{decodes}_2(i, e, st) \text{ fi}$

clarification:

$\text{union-decodes}(R; \text{dec_}R; \text{decodes}_1; \text{decodes}_2)(i, e, st)$
 $\equiv_{\text{def}} \text{branch}(R(i, e); \text{dec_}R(i, e); p.\text{decodes}_1(i, e, st); \text{decodes}_2(i, e, st))$