We investigate the problem of finding monoids that recognize languages of the form $L_1 \rtimes_T L_2$ where $T$ is an arbitrary set of routes. We present a uniform method based on routes to find such monoids. Many classical operations from the theory of formal languages, such as catenation, bi-catenation, simple splicing, shuffle, literal shuffle, and insertion are shown to be just particular instances of the operation $\rtimes_T$ (see [3]).


