

HANDHELD ELECTRONIC DEVICE WITH ROLLER BALL INPUT

ABSTRACT

An improved handheld electronic device includes an input apparatus, an output apparatus, and a processor apparatus. The input apparatus includes a reduced keyboard and a roller ball input. The roller ball input includes a movable portion that is substantially
5 continuously rotatable with respect to a housing of the device and is rotatable about more than one axis to provide input. The processor apparatus includes a disambiguation routine that can output various proposed interpretations of inputs from the reduced keyboard. The roller ball input advantageously provides various inputs to the handheld electronic device without requiring significant user attention, which enables a user to direct a greater amount of
10 attention to the output from the disambiguation routine and to other aspects of the device. The roller ball input potentially can be configured to additionally be translatable to provide an input, and additionally and/or alternatively the roller ball input can provide a tactile or other feedback to a user.

Fig. 1