ORASIS- a coastal video monitoring platform

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A Coastal Video Monitoring system typically consists of one or more video cameras, connected to a computer acquiring coastal imagery 10 min every hour during daylight, with an acquisition frequency of 1-4 Hz. Images are processed to generate the system's 'basic products'. i.e. time-averaged, variance, snapshot and timestack images, which are all projected in geographic coordinates using standard photogrammetric techniques. Following, a set of post-processing tools allows daily monitoring of the intertidal topography, nearshore bar and shoreline position, as well as swash motions. ORASIS is a platform which has been deployed at 4 sites up to now; Faro Beach (Portugal), Cadiz (Spain), and Ammoudara and Koutsounari beach (Creta, Greece), all unique and very challenging sites in terms of coastal morphodynamics (http://www.vousdoukas.fzk-nth.de/index_video.html). ORASIS is not hardware, but (i) software developed to acquire and process coastal imagery; and (ii) expertise related to the selection and installation of different camera models and lenses. The existing coastal monitoring systems have been based on different operating systems, computers, as well as different combinations of camera and lens models, depending on the project's budget and specific needs. Different open source GUI applications are available to estimate intrinsic and extrinsic camera parameters, geo-rectify images and extract the shoreline, as well as generate swash time series form timestack images.