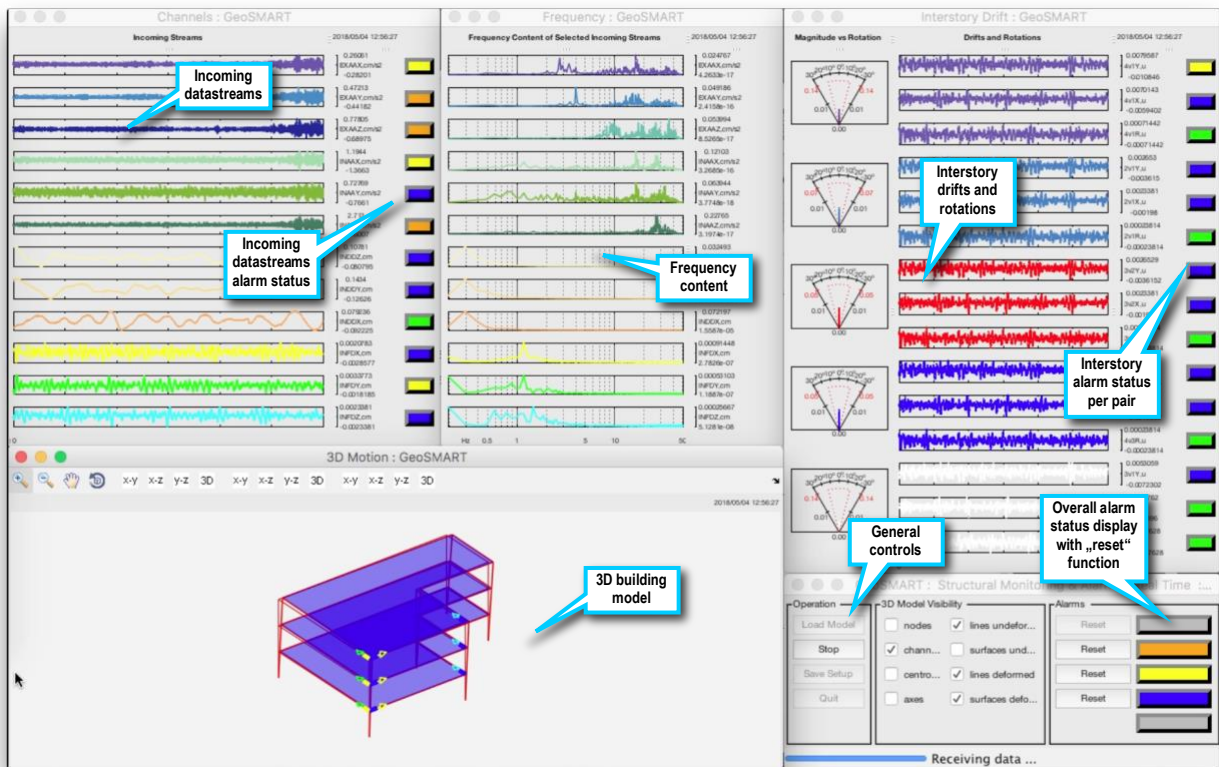


## GeoSMART Software

GeoSMART is an innovative graphical Java based application, that provides tools for **realtime structural health monitoring** for civil engineering structures. GeoSMART, with its “smart” features, can monitor and display the status of a structure that is instrumented GeoSIG measuring instruments.



## General Tasks

- Acquisition of near realtime datastreams provided by any standard GeoSIG instrument
- Display of incoming datastreams with user configurable color selection and realtime threshold exceedance evaluation
- Display of frequency content of incoming streams
- Display of a 3D animated model of the structure consisting of lines and surfaces, with near-realtime motions
- Zoom, pan, 3D rotate, 2D planar views, display of deformed / undeformed shapes, show/hide features on the animated model
- 3D display of assigned sensors, their orientations as well as their exceedance status
- For regular buildings, calculation of rigid body translations and rotations of any instrumented floor on the X - Y plane
- For regular buildings, calculation and display of interstory drifts between centroids of defined floor pairs
- Innovative fan-shaped interstory drift display as well as conventional linear display
- Creation of visual alerts in case incoming and/or calculated data exceed defined thresholds with “reset” function
- Four exceedance levels with color coded alarm levels blue, yellow, orange and red)
- Generate and send alarm text at the serial or UDP port of the computer (compatible hardware relays available upon request)
- Continuously save incoming and / or calculated data into ASCII txt files
- Complete system set-up based on fully user configurable text files
- Independent windows for incoming datastreams, interstory evaluation and 3D motion, which can be shown on different screens

GeoSMART has been designed to meet fundamental engineering requirements with respect to structural health monitoring applications.