

HICO Online Processing Tool

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In partnership with:

EXELIS

Visual Information Solutions

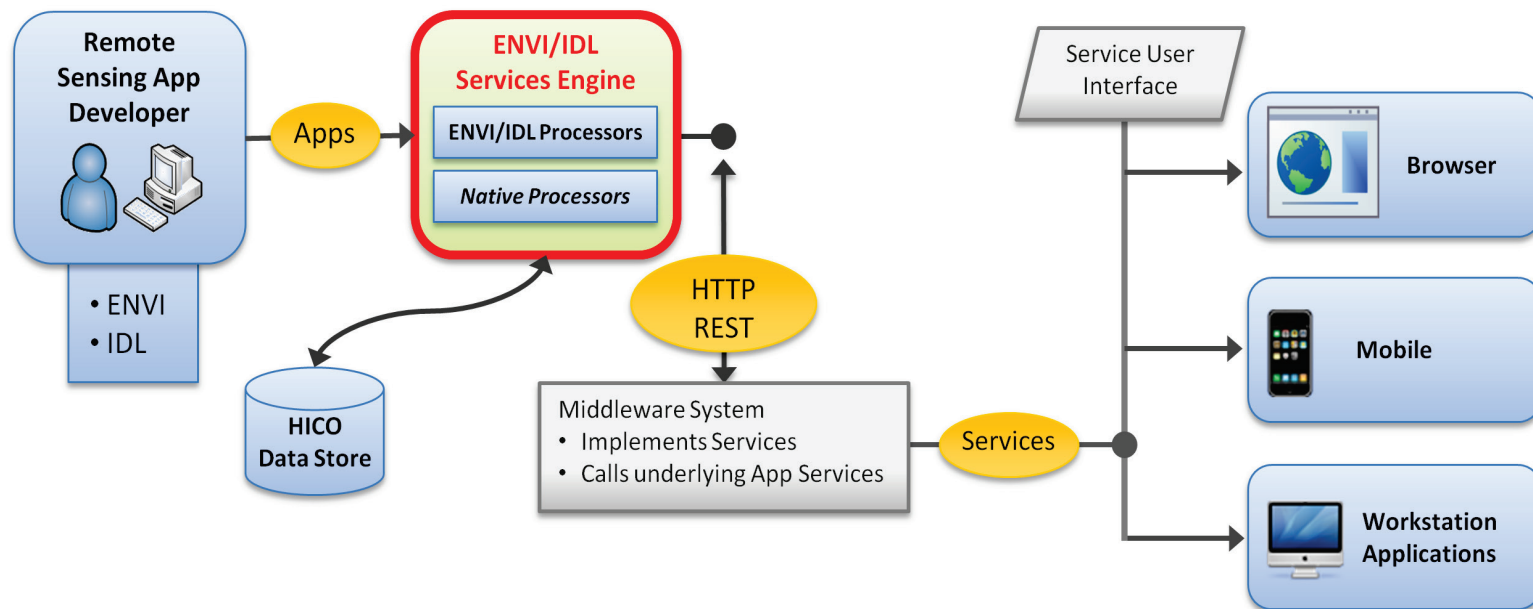
HICO Online Processing Tool

Development of a prototype cloud computing system for the processing, analysis and visualization of HICO imagery

The screenshot displays the HICO Online Processing Tool interface. The browser's address bar shows the URL `http://localhost:8080/`. The page title is "HICO Online Processing Tool". The interface features the HySpeed Computing logo on the left and the EXELIS logo on the right. The main map area shows a satellite-style image of the Florida Keys, with a blue location pin on the island of Key West. The map includes labels for "Everglades National Park" and "Mud Bay". A "DRAFT" watermark is visible in the bottom right corner of the map. On the right side, there is a "Tasks" panel with a "Data" section. The "Data" section is titled "Chlorophyll" and contains the following fields: "Input Image" (set to "Florida Keys"), "(Mask Image)" (empty), "(Mask Band)" (empty), and "Region of Interest" (set to "24.909481126447975,-80.7663"). Below these fields are "Submit" and "Clear" buttons. The browser's taskbar at the top shows several open applications, including "Apps", "Stuff", "ENVI Admin", "GeoServer", "HICO", "ESE PSG", "HICO UT", "GeoServer: New dat...", and "Leaflet".

ENVI Services Engine

Allows deployment of traditional ENVI/IDL desktop capabilities into on-line, on-demand environments



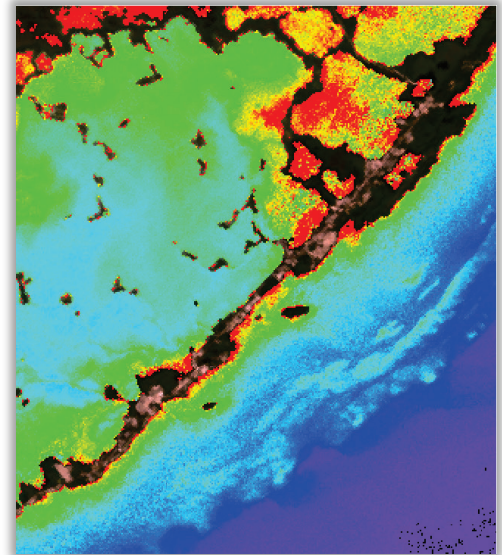
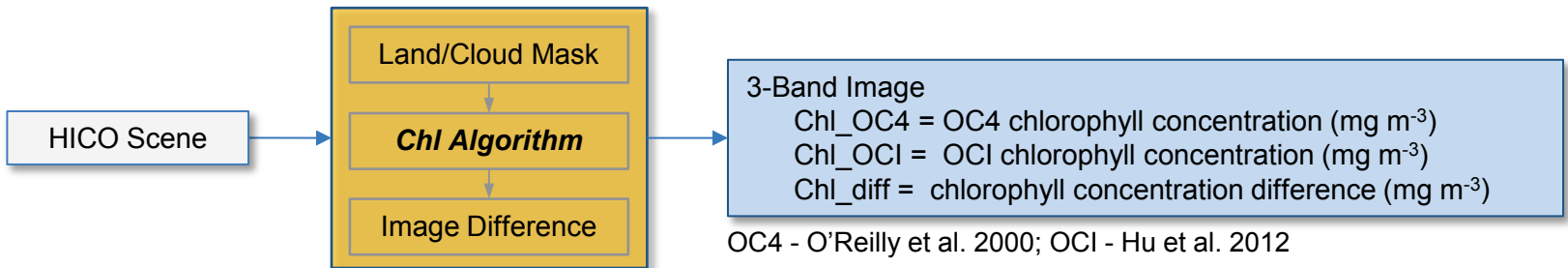
HICO Image Pre-Processing

Processing steps prior to deployment in ESE include both atmospheric correction and improved geo-location



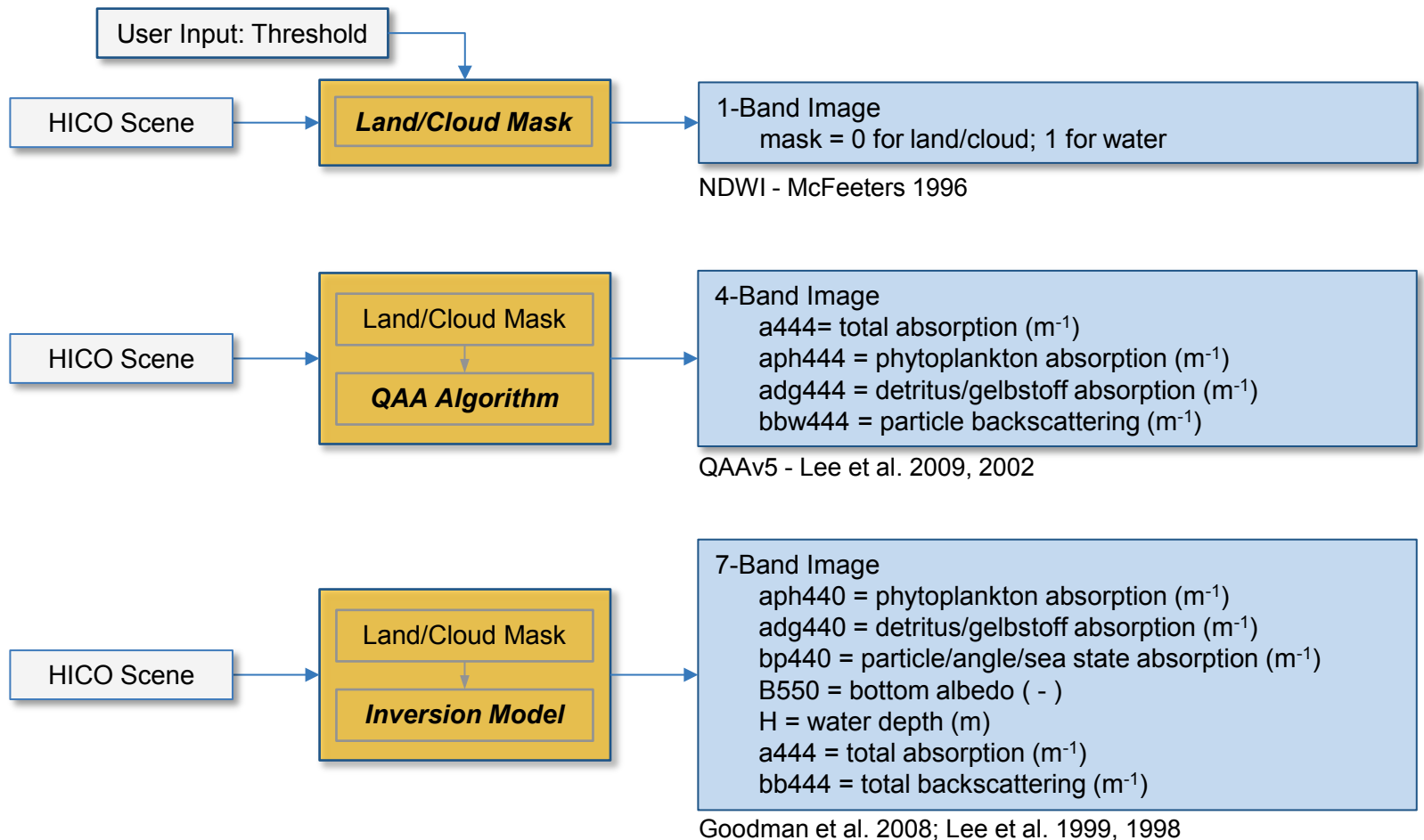
Image Processing Workflows

Algorithms are being implemented using workflows, whereby sequential processing steps are explicitly linked in the interface



Additional Algorithms

Additional workflows and algorithms include a land/cloud mask, quasi-analytical algorithm, and a semi-analytical inversion model



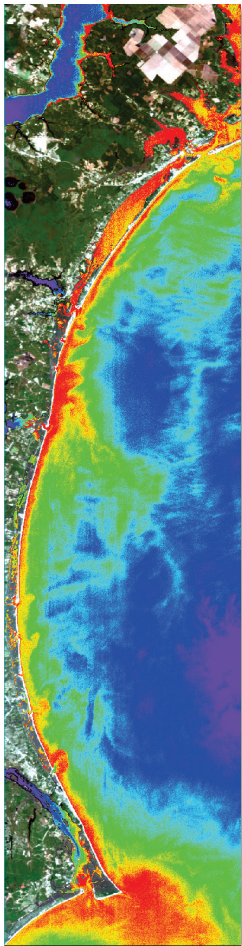
HICO Data Locations

A list of 20 top-priority high-quality scenes have been identified for inclusion in the prototype processing system

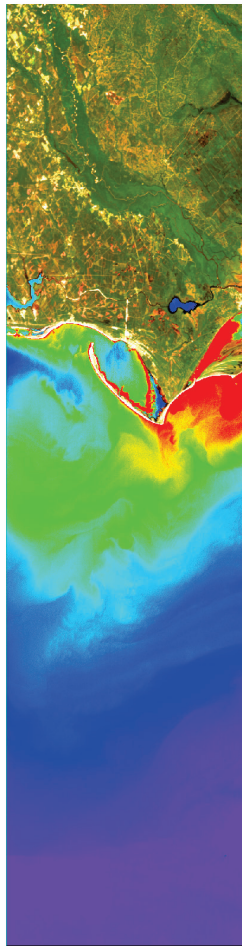


Example Chl OC4 Output

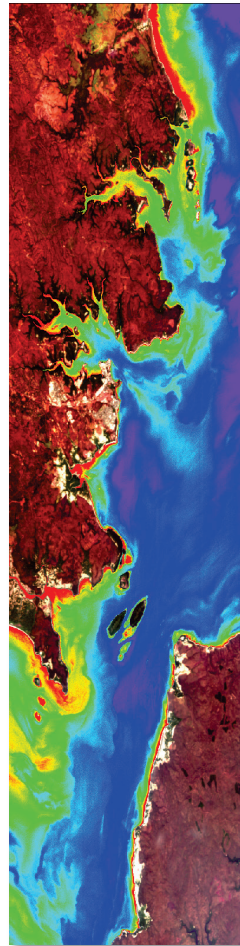
Processing tool facilitates on-demand implementation of algorithms across a global range of HICO scenes



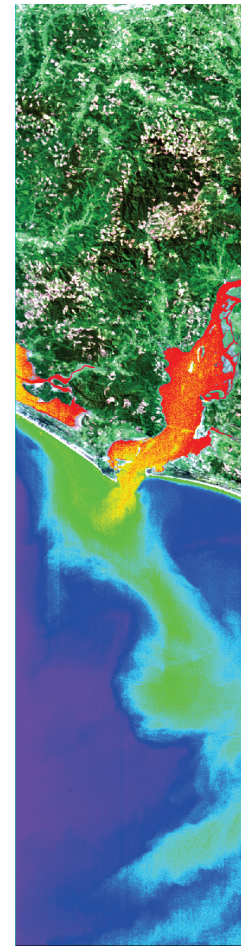
Onslow Bay



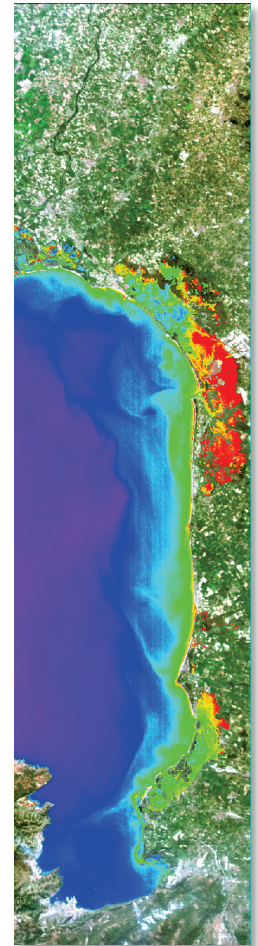
St Joseph Bay



Darwin Harbor



Columbia River



Acqua Alta

Future Development

A look ahead at the prototype completion and plans for future development into an operational system



Prototype deployment:

- Scheduled for completion in June 2014
- Prototype system to be available for 6 months
- Science community is encouraged to test/evaluate

Operational system:

- Requires additional funding !
- Ideally - Installation on server where data resides
- Development of data library and data ingest tools
- Implementation of additional algorithms and analytics

Thank You !



HySpeed
COMPUTING

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