

USING A CROSS CORRELATION APPROACH TO WETLANDS MAPPING

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ABSTRACT

As the data available from environmental **satellites** has increased, the tools available to create useful thematic and decision support products have shown similar growth. MDA Federal (formerly Earth Satellite Corporation) has developed and patented a **change** detection algorithm called Cross Correlation Analysis (CCA). The CCA process is used to perform continuous **change monitoring** for our clients. CCA's original use was to identify **changes** and losses in **wetlands** that were mapped by the U.S. Fish and Wildlife Service's National Wetlands Inventory (NWI) program. Since then we have used it for a variety of applications including broad area monitoring, land cover mapping and updating, and wetland applications. David Cunningham, Vice President of Environmental and GIS Services at MDA Federal will first describe the CCA algorithm and process and then provide specific examples of its use in **wetlands** mapping and continuous **change** monitoring.

Mr. Cunningham will examine the concept of how CCA enables geographic data to move from a costly, occasional (once per decade) update process to a continuously operating process, thereby allowing consumers of geographic data rapid access to timely information. He will also discuss the latest update to CCA, named Correlated Land **Change** (CLC). CLC has demonstrated a reduction in false positives over CCA for cultural **change** by searching for persistent **change**.

KEYWORDS

Wetlands, monitoring, change, satellite.