

InCLUDE Data Exchange

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InCLUDE Data Exchange

InCLUDE stands for:

Integrated

Cadastral

and

Land

Use

Data

Exchange

Who are the Partners?

- **NC DENR** – The State’s lead environmental agency
- **Eastern Band of Cherokee Indians** – Tribal lands mostly in NC
- **NC Property Mapper’s Association** – a non governmental professional organization
- **NC Division of Land Records** - part of the Secretary of State’s office:
- **The SMAC WGSP**: SMAC = *Statewide Mapping Advisory Committee* - an arm of the *North Carolina Geographic Information Coordinating Council* (GICC) devoted to defining spatial data content standards and addressing statewide mapping requirements.

WGSP = Working Group for Seamless Parcels – a subcommittee formed by the SMAC in early 2008 to address a collection of issues related to geospatial parcel data in North Carolina. Has representation from Municipal, County, State, Tribal and Federal Agencies.

Legal concerns (in NC) raised by the sharing of County GIS parcel data.

If the State incorporates county parcel data as an “unedited reference layer” in a State application, can the State comply with the public records law requests for copies of the data they use in their application and still decline to share the parcel data if the county’s data sharing agreement prohibits secondary distribution ?

There is no 100% definitive legal opinion, but based on existing precedent, if the State has not edited the data in any way, the data can still be classified as County data rather than State data. If the State modifies the data and adds value to it, then it becomes a State GIS layer and the State cannot refuse to share it under the public records laws.

The Counties may authorize State and Federal Agencies to use a copy of their data, but not redistribute it to the private sector. In NC, County GIS data exempt from the public record laws that the State and Federal Agencies must follow, and they are allowed to charge for copies of their GIS data, ostensibly for cost recovery purposes.

Legal concerns (in NC) raised by the sharing of County GIS parcel data.

- If the State integrates county created parcel data into a State application, can the State distribute map products that include a depiction of county parcel data (but not the data itself)?

No 100% clear legal opinion here either, but as long as there is a disclaimer on the map indicating the parcel information is unofficial and that the local government is the definitive source, and the State has permission from the county to include parcel information on its publication maps, this is probably legitimate.

- If a county creates a GIS System, can the results of that system (such as a parcel data layer) be licensed as an intellectual product and therefore be protected by copyright or by other means to prevent unauthorized distribution?

In some states, that seems to be the case. In NC, this has not been definitively determined in court yet, but the prevailing opinion is no.

Legal concerns (in NC) raised by the sharing of County GIS parcel data.

If a county requires a State agency to sign a licensing or trading partner agreement placing distribution restrictions on a county-created GIS product, can the State refuse a request for the product under G.S. 132 Public Records?

Again, this has not been definitively tested in court yet, but the prevailing opinion is yes.

Most NC Counties (all but 5-6) have no issues with sharing GIS data with State and Federal Agencies, but many more do not share the data freely with the private sector. Requiring a data sharing agreement for State Agencies is often to provide justification for no redistribution under the Public Record laws.

Most who do charge, only charge a reasonable fee to cover the costs of distribution, but a few think very highly of their data and charge much larger amounts. The recent ruling on the sale of parcel data in CA may have soon have some impact on this.

Many counties who do share data freely with the private sector still require the recipients to sign a licensing agreement that prohibits them from reselling the data. This is primarily intended for street network data, but parcel data is becoming more of an issue recently, with Google Maps starting to display it.

And a number of counties put the data on their website for free download and do not care who does what with it.

Why use the Exchange Network to share parcel & land use data?

Many environmental problems cross jurisdictions and involve a web of natural systems that interact with human communities in complex ways. The business of managing and solving these problems has become highly information intensive.

Environmental policy makers and other stakeholders need access to timely, accurate, and consistent data that present a holistic picture of the environment. This includes property ownership and land use.

Exchanging high quality information allows governments, regulated communities, interest groups, and the public to make better planning decisions regarding the environment. Property data is a vital missing piece of the puzzle, not only for planning, but also for response activities when there is some type of incident that threatens our environment.

Proposal for a new geospatial Cadastral/Land Class Data Exchange

Each County is the custodian of Cadastral and Land use data, and each has its own unique parcel and CAMA database schema.

Most State and Federal Agencies need access to current parcel/land use data for regulatory, planning, response and mitigation activities - inevitably across county lines.

Supplying current cadastral and land class data to State and Federal Agencies is becoming an increasingly large burden on County governments.

The lack of a common data exchange standard for parcel and land class data also is a burden on State and Federal Agencies - in that they must manually stitch data from many sources together, usually as one-off processes.

Proposal for a new geospatial Cadastral/Land Class Data Exchange

Two ways for Counties to participate:

Partner Counties would use a free Cadastral Node Client developed with grant funding to share their parcel / land class data with the NC Node. The NC Node would make the seamless parcel data available to other Exchange Network partners (EPA, adjoining states) and to NC OneMap, as the County specifies.

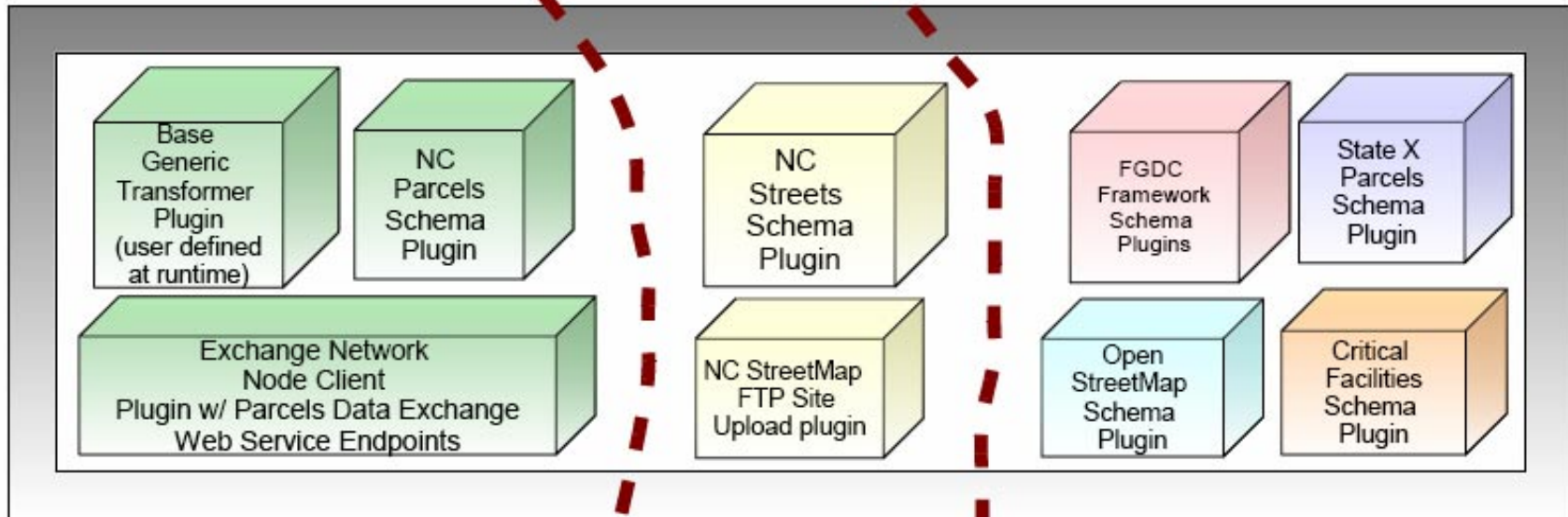
Partner COGs could assume the parcel data sharing stewardship role for Counties in their region that do not have available staff to learn how to use the Cadastral Node Client to submit parcel data to the State Node.

Proposed Modular, Open Source Node Client Application

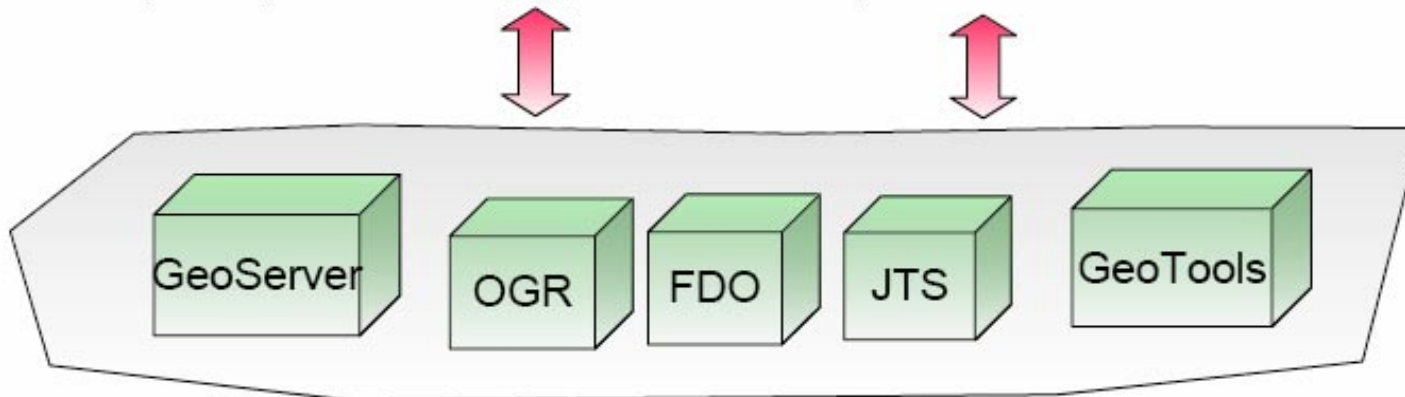
Initial WGSP development

Possible future
WGRT development

Examples of potential future plugin development
by others, under other funding vehicles -
if we develop a re-usable open source tool framework



Focus initial development to produce a flexible cross-platform desktop tool that provides a GUI to allow data providers map/transform their native data schema (in a reasonable number of formats supported by OGR and FDO) to a simple GeoRSS GML polygon schema, or to shapefile format.



Build on a platform of existing, widely adopted open source spatial data transformation/conversion libraries and existing applications that provide existing GML schema mapping & transformation capabilities for WFS

Proposed Functionality

The Cadastral Node Client would include a visual field mapping / transformation component to aid County staff in their initial parcel data attribute/schema configuration tasks. It would be built using a plug-in architecture using open source GIS components (such as GDAL, FDO, GEOS and GeoTools) so that it would be freely redistributable. Hopefully can be a set of plugins for an existing Node Client, as long as it is fully open source.

In time, it is hoped that other transformation plug-ins might be developed for the Node Client so that other datasets (street centerlines, etc.) could also be aggregated into seamless statewide GIS datasets, and the transformation capability could be used with or without and associated Exchange Network data flow.

Proposed Functionality

Develop a Cadastral schema (GML Simple Features, probably Level 1) and data flow for the Exchange Network. Stand up a new NC Cadastral Node on OpenNode2 that would be a “sister” Node to the official NC Exchange Node.

Develop a secure web publishing service interface for the NC Cadastral Node. This would be a web application where public sector end-user of the data could log in to access the seamless parcel data from a user friendly, map-centric interface. Applications, such as the NC Node, the EPA Central Data Exchange and NC OneMap could be written to access the data directly from the underlying Node web services.

Provide training and outreach to participating Counties and COGs on how to set up Node Clients; how to map their parcel and CAMA databases to the new Cadastral/Land Class data exchange schema; how to publish their data to the NC Cadastral Node via their Node Client.

Proposed Functionality

The Eastern Band of Cherokee Tribe will also be participating. They will put up another instance of OpenNode2 (.Net flavor) and implement the InCLUDE data exchange, with some slightly different parameters.

Full information on Tribal land holdings is not allowed to be shared with County or State Agencies, according to the Tribe and BIA. I never did get a clearly understandable answer as to why this is. Apparently BIA currently keeps the records in a somewhat convoluted system.

The Tribe's GIS Coordinator is developing a large ESRI SDE geodatabase to store their data in a modern format, so perhaps access restrictions can loosen in the future. Right now, the plan is for the Tribe only to share the outer boundaries of their land holdings, and no internal parcel ownership details via their InCLUDE data flow.

Proposed Functionality

The State will use the Java flavor of OpenNode2, to ensure that the same functionality will be developed for both flavors for this new data flow.

The State's back-end Node database repository for the InCLUDE node will use PostgreSQL/PostGIS, so that it will be able to store spatial data. The existing NC Exchange Node uses a non-spatial instance of Oracle.

The Tribe's back-end Node database repository for their Exchange Node will be a SQL Server/ArcSDE implementation, because that is what they are currently in the process of building to manage all of their spatial data.

Participating NC Counties

This will be a proof of concept / pilot project with 25 of the 100 NC counties participating in the first round. Several COGS will also participate and handle the data transformation and submission duties for their constituent counties.

Once proven successful, usage can expand to the remaining 75 counties over time.

Currently, only two NC counties do not have digital cadastral data in a form they could use with the transformational Node Client, but they do have contractors working on the conversion, and it's only a matter of time before they can participate.