Evolution of Statewide Modeling in Florida: the Teamwork Approach

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SYNOPSIS

While animation, pictures and anecdotes (to spice up an otherwise dry flavor) bolstered my presentation, the following is a simple and concise synopsis of the salient points.

The key to the success of the Florida Statewide Model's evolution has been the recognition that most trips within the state are under local influence. That is, only a small percentage of the person and freight trips exceed 50 miles and even a smaller percentage venture past 200 miles. While many of the gravity modeling methodologies are often criticized when used with statewide models, these same methodologies have actually been the backbone of the Florida Statewide Model evolution. Early recognition of the importance of local transportation infrastructure on statewide transportation systems allowed Florida to disaggregate the statewide modeling process to include the broad array of urban, county, regional and special application models that constitute the Florida Statewide Modeling System.

WHERE IS THE NATIONAL MODEL?

My air trip from the eastern reaches of the continent, Florida, to the western boundary, California, pointed out a glaring reality: it is difficult to imagine that statewide models serve as the only means to represent a transportation system of national travel and international trade routes to analyze the efficient movement of people, freight and raw resources. With the absence of a national model, each state is challenged to forecast the national influences at their borders.

FLORIDA STATEWIDE MODEL APPLICATIONS

Since my presentation involved a statewide model for Florida, I asked the audience to travel with me and review the broad array of transportation infrastructures supported by the Florida Statewide Modeling System.

The next dozen slides gave the audience a feeling for Florida's geography and model applications: rural Interstate highways, Turnpike, Turnpike Revenue Corridors, High-Speed Rail, truck and container ships, trips to the moon (injected for a little humor), trucks on the highway, trucks to train, the Tri-rail commuter system on the east coast, Metro Rail, and the People Mover in Miami. Urban Interstates were contrasted with the rural environments of Alligator Alley through the Everglades (alligator shown for rural humor). The Overseas Highway completed our trip to the southernmost part of the state, the Florida Keys. At the Florida Keys, we started our story of how the Statewide Model evolved.

PARTNERING TOOLS (KEY WEST) SLIDE

Two chairs on the beach symbolize the basic requirement for partnering: two or more must join together to have a partnership. Also shown on the slide are grains of sand on the beach, which individually are small particles of silica but when collectively joined together form a beautiful beach. The beach slide

exemplifies how partnering is the basic support system for the statewide modeling process—all levels of government working together as a single team.

EVOLUTION OF THE STATEWIDE MODELING PROCESS

The next six slides showed the evolution of Florida, a high growth state, transitioning from 15 urbanized areas in the 1980s to 25 urbanized areas in 1990 and the expectation to add an additional seven urbanized areas with the 2000 Census. Paralleling this demographic evolution, more urban models were developed and were joined by county models. County models were joined by regional models; regional models supported corridor models and revenue models were used to provide alternative financing for transportation infrastructures. Collectively, these form the Florida Statewide Modeling process.

EVOLUTION OF THE TEAM (STATEWIDE MODEL TASK FORCE)

Over the last two decades Florida has built a very active modeling community supported by the Statewide Model Task Force and strong user groups at the local level.

The lead-in slide to the evolution of the team uses an illustration of triangles to show how the majority of trips, person and freight, are influenced by local factors. Similarly an evolution from a centralized Florida Department of Transportation to a decentralized Department recognized the need to move the decision-making process to the eight transportation districts in Florida and their local governments (city, county & MPO).

Slides 32 and 33 demonstrate how a seamless bond between the policy side of the team is related to the technical side of the team. This union provides feedback to both parties and builds a sense of trust and recognition for the importance of each other's role.

The next half dozen slides (34-41) demonstrate the basis for the formulation of the Statewide Model Task Force, which maintains stewardship over all modeling activities, and is headed up by three chairmen. The tri-chairs, one chosen from the MPOs, one from the Districts, and one from regional agencies gives leadership roles to district, MPO, and regional interests. Additionally, the tri-chair structure ensures that there is never a tie vote from the leadership and policy direction is never dominated by one interest group.

Team recognition is accomplished by giving key members a vote, resulting in a large voting body of the Model Task Force. Model Task Force voting members consist of representatives from 25 MPOs, eight district, four user groups, and one representative each from the Federal Highway Administration, a transit agency, the Department of Environmental Protection and the Department of Community Affairs. To ensure decentralization is carried out in good faith, the Central Office acts as a non-voting facilitator and support unit. The Model Task Force also enjoys the participation of a majority of consultants operating in Florida and many national forms dealing with transportation modeling. The diversity of the group forms a rich resource for creating technical sub-committees.

Strong technical sub-committees allow this enormous voting team to function very efficiently. The entire state operates from a universal menu for modeling applications. New ideas are assigned by the tri-chairs

to sub-committees for evaluation, testing, and providing recommendations for the Model Task Force to vote on. This evaluation by peers provides oversight and flexibility--necessary for healthy growth.

Slides 38-40 show the composition of the modeling subcommittees and its membership. Efforts to foster communications and the sharing of a broad spectrum of transportation modeling information include a rigorous training program offering workshops given at the local level throughout the year (slide 50). We often comment that the most important workshop we teach is basic modeling concepts. The basic modeling course is kept lively and primarily attended by people just entering the modeling community or those wishing to have a refresher course. Recognizing that most of the attendees at our basic course are actually transitioning through career ladders, we often joke that they go on to lesser missions such as MPO Director, Transportation Director or someone you might later recognize as your boss. However, after attending the basic workshop, they have more of an understanding of the complexities involved with modeling.

Newsletter publications have provided a valuable means for technical information sharing. These newsletters also provide recognition to the many modelers working together in Florida developing new techniques and applications. Slides 44-49 display the type of information shared through the *Florida Transportation Modeling* newsletter, a Central Office publication in support of the Statewide Model Task Force, and through newsletters by each of the four user groups.

FUTURE EVOLUTION

Future evolution of the Statewide Modeling process will continue to recognize that local policy and transportation infrastructure directly affects more than 95% of the person trips and 80% of the freight trips that are less than 50 miles in length. While these trips are individually local, they collectively have statewide impacts. The Satatewide Model will continue to combine these local trips with regional and statewide trips to represent the synergistic effects of the Florida Statewide Modeling process.

As discussed by Ysela yesterday, the Statewide Model Task Force was recognized by the Chairman of the Florida Senate Transportation Committee and asked to make recommendations to help ensure development factors and freight modeling are fundamental in the future development of all transportation models in the State of Florida. This interaction between policy makers and modeling practitioners will help Florida to continue to have a strong modeling community and a strong modeling process.

Florida is at a crossroads and has an opportunity to set into motion the evolution required to carry us into the twenty-first century. The statewide modeling process has the necessary policy and management direction to improve freight modeling, intermodal connectivity, economic development factors, international trade routes, non-highway transportation systems, and more.

The Statewide Modal Task Force provides the oversight and guidance to develop 25 MPO, six regional, seven county, and six revenue models, all using model structures that allow the interchange of data and all operating interactively with each other. The once thought to be impossible task of modeling three urban areas within the same model has been completed on both the east and west coasts of Florida. Imagine technical folks from three different MPOs all working cooperatively together on the same

model.The challenge for the future is to have the ability to model all of Florida's MPO models at the same time.

Florida has requested resources to support the integration of all models into one mega-model. The concept of how this model will operate is much the same as GIS with multi-levels of data, each having different information about the same data theme, (i.e., bridges, roads, and utilities for the Florida themes). The model likewise would consist of statewide, regional, county, and MPO levels all stacked and each supporting the other. As you need more detail, you could "bore" down to the appropriate level, while not having to run the more detailed level in parts of Florida outside your area of concern.

Recent computer technological improvements available to the Florida modeling community would support this ambitious evolution process. GIS interfaces are being completed to provide for visual communication of modeling results. This evolution would attempt to follow the guidelines of the federal Travel Model Improvement Program (TMIP) at the national level, thus providing the infrastructure to support TMIP's full implementation in future years.

The most important evolution will be the preservation of the existing partnership of federal, state, county, city, and MPO agencies which is the lifeline of the Statewide Model Task Force and the Florida Statewide Modeling process.