



Improving Real-Time and Intra-Hour Trading/Scheduling and New Market Formations

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NEW MARKET FORMATIONS IN NORTH AMERICA

- To improve Real-Time and Intra-Hour trading/scheduling in Bilateral Markets
 - *Review the OATI implementation of three new markets created in the last two years*
 - *Examine the need for alternative market structures*
 - *Analyze features and emerging trends*
 - *Share the operating experience*



REQUIREMENTS FOR THE NEW MARKET

- Must be relatively inexpensive to deploy and operate
- Quick installation cycle
- Be flexible to support regional requirements
- Facilitate congestion management via transmission capacity management
- Provide additional user services (transmission, scheduling, price discovery)
- Preserve and support participant's legacy software investment and business practices
- Allow for increased speed of full transaction
- Provide transparency
- Respond quickly to accommodate variable resources



WHAT ARE THESE MARKETS?

- Southern Company Energy Auction - operational in April, 2009
- Florida Cost Based Broker System (FCBBS) - operational in October, 2009
- Joint Initiative Intra-Hour Transaction Accelerator Platform (I-TAP) - scheduled for deployment in fourth quarter, 2011



SOUTHERN ENERGY AUCTION DETAILS

- Organized by Southern Company
- Operated by an independent auction administrator
- Monitored by independent auction monitor
- Next Hour and Day Ahead markets for firm and recallable energy
- Market wide clearing at intersection of bid and offer price curves
- Market wide clearing price for settlement
- Multiple Buyers and Sellers
- Bilateral billing
- Credit limits enforced in clearing
- Auto-generated Energy ID for NERC tags
- Provided via OATI webMarket



FLORIDA COST BASED BROKER SYSTEM DETAILS

- Organized by consortium of several Florida Utilities that formed the Florida Cost-Based Broker System, Inc.
- Operated by independent market administrator
- Next hour market for energy
- Bilateral clearing of bid/offer stacks
- Maximum savings objective function - highest priced bid matched against lowest priced offer
- Lowest cost transmission path with adequate ATC selected for each transaction
- Automated transmission procurement and scheduling
- Automated tag creation
- No human intervention after placement of initial bid/offer
- Cradle-to-grave automation - market automatically consummates transaction, buys optimal transmission path, creates NERC tag
- Bilateral settlement
- Provided via OATI webMarket



INTRA-HOUR TRANSACTION ACCELERATOR PLATFORM (I-TAP) DETAILS

- Sponsored by three Western grid groups: Columbia Grid, Northern Tier Transmission Group and WestConnect with currently 17 market participants and growing
- Operated by market administrator
- Bilateral trading only, users post energy and capacity bids and offers on I-TAP trading board
- WECC products and compliant trading strips supported (hourly, daily, monthly, or user defined)
- Intra-hour postings down to one minute granularity
- Price discovery
- On-line negotiation support tools (trade Instant Messenger and counteroffer posting) integrated directly into trading paradigm
- In or out-of-market trade creation

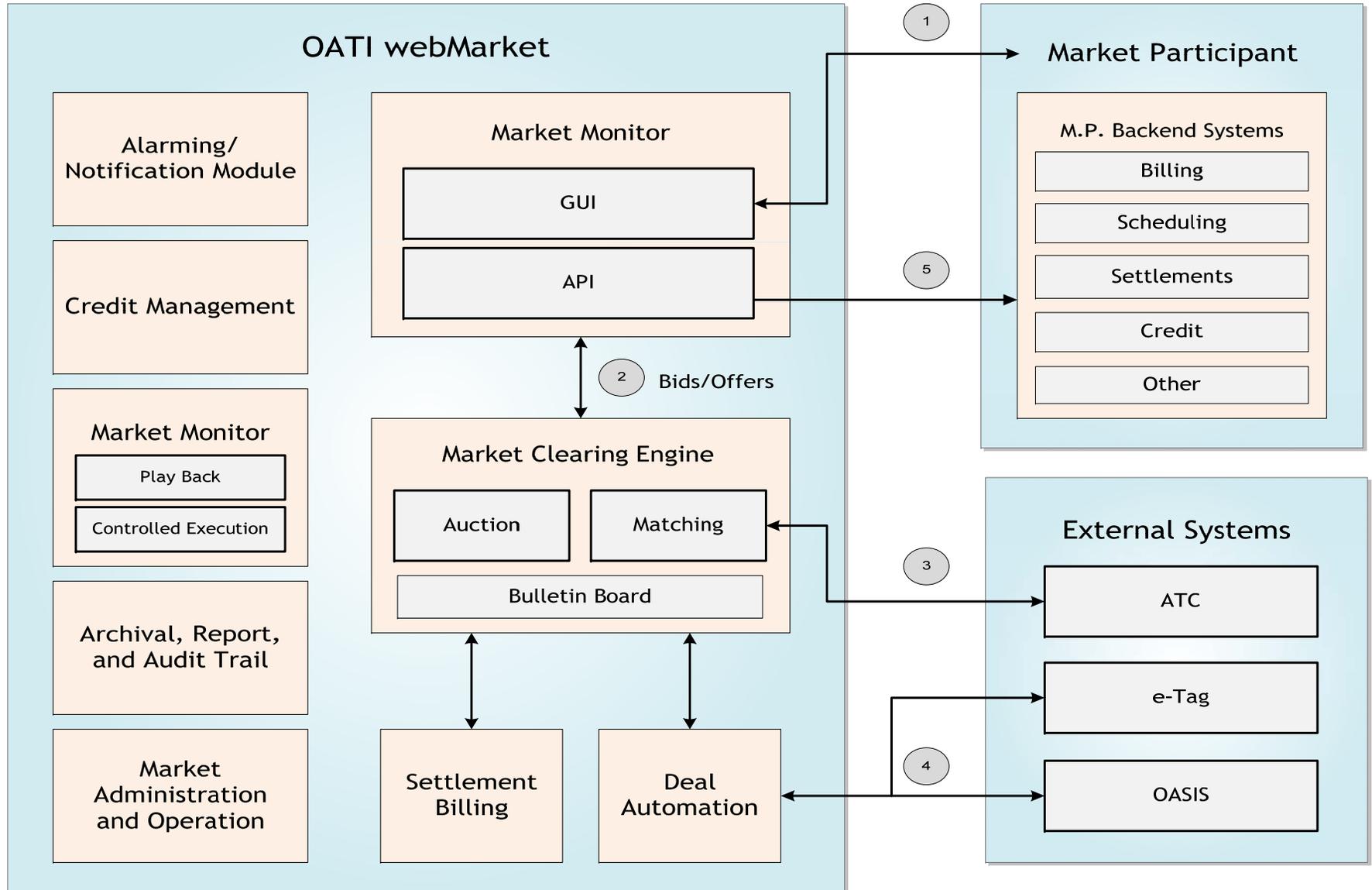


INTRA-HOUR TRANSACTION ACCELERATOR PLATFORM (I-TAP) DETAILS (CONTINUED)

- Transmission grid includes 28 providers covering most of the Western Grid
- Transmission path analysis (cost and ATC discovery) before and/or after financial transaction consummation
- Participant transmission portfolio maintenance
- Scheduling for Intra-Hour, hourly, and daily:
 - *ATC services for all path/provider service combinations*
 - *Automatic transmission route generation*
 - *On-the-fly transmission purchases or use of existing rights*
 - *Tag creation for I-TAP transaction*
 - *Integration with OASIS, e-Tag, and participant trading and scheduling systems*
 - *Provided via OATI webExchange*



FUNCTIONAL BLOCKS OF WEBMARKET





REGIONAL GROUPS BENEFIT OF THE NEW MARKET PLATFORM

- Ability to transact in limited time periods
- Ability to respond to variable resources
- Increased transparency of transactions
- Advanced communications
- Ability to perform Automatic Scheduling
- Savings to end consumers



FUTURE EMERGING TRENDS IN NORTH AMERICAN MARKETS

- New markets must support regional product lineups
- New markets must support short-term trades caused by proliferation of variable generation resources
- Flexible sub-hour trading intervals must be supported
- Trading environment must seamlessly integrate with relevant regional transmission, scheduling, and security systems (e-Tag, OASIS, etc.)
- Participants require flexible and non-restricted on-line negotiation facilities
- Low cost of deployment and operation required
- New markets must be flexible and able to support emerging FERC requirements (i.e. intra-hour scheduling)



THANK YOU

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