UCAIug OpenADR Taskforce Meeting

Mar 09, 2010

Minutes

- Gave a very brief liaison report on OASIS and SEP. OASIS EI TC proceeding with drafting of doc. SEP recently voted on version 1.1.

- Discussed the documents in the agenda. Ed agreed to post documents to the OpenADR sharepoint. Very interesting discussion of scope of various efforts such as SEP and CIM.

- Joe pointed out that we should invite Gale Horst to an upcoming meeting and have him present his EPRI report.

- Bob Old pointed out that there is an ASHRAE effort being formed that may be relevant.

- Ed gave a brief overview of the existing OpenADR specification.

- Action Items for next meeting:
  - Invite Gale Horst (Ed)
  - Give briefing on CIM (Joe and/or Shaun) including its relationship to SEP and other efforts such as OpenADE
  - Go over detailed plan for drafting SRS (Ed, Bruce, Terry)

Agenda

- Liaison reports from other groups (if any)
- Discussion of existing documents and sources
- High level presentation of existing OpenADR specification from Demand Response Research Center of LBNL
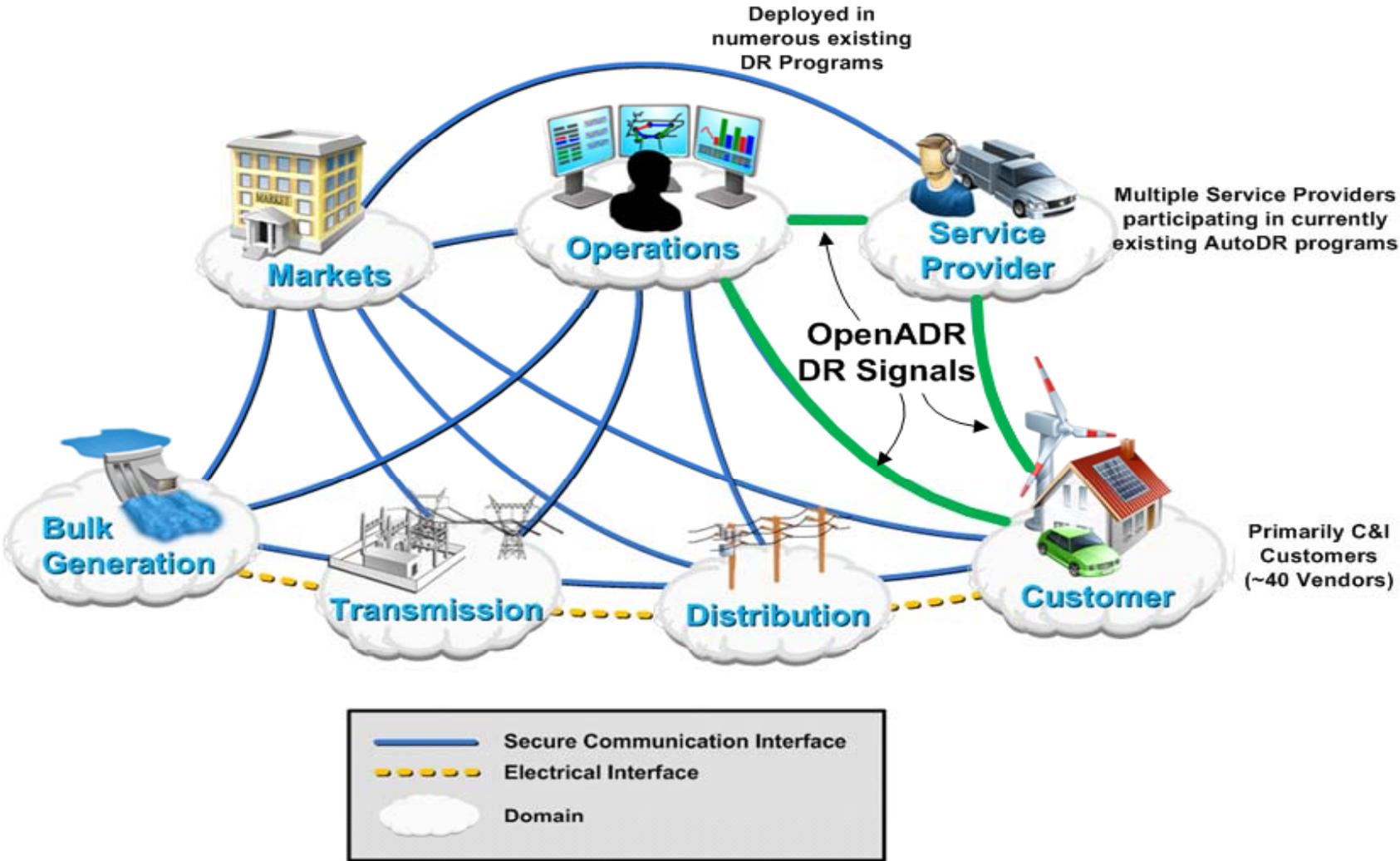- Next Steps

Preliminary List of Relevant Docs

– NAESB DR Requirements document (Ed)

– AMI Ent (Joe Zhou)

– OpenADR taskforce use cases (Ed)

– OpenHAN (Charlie Smith)

– OpenADE (TBD)

– SEP 1.0, 2.0 (Bob Old, John Mani)

– EIS (Ed)

– CIM (Joe Zhou)

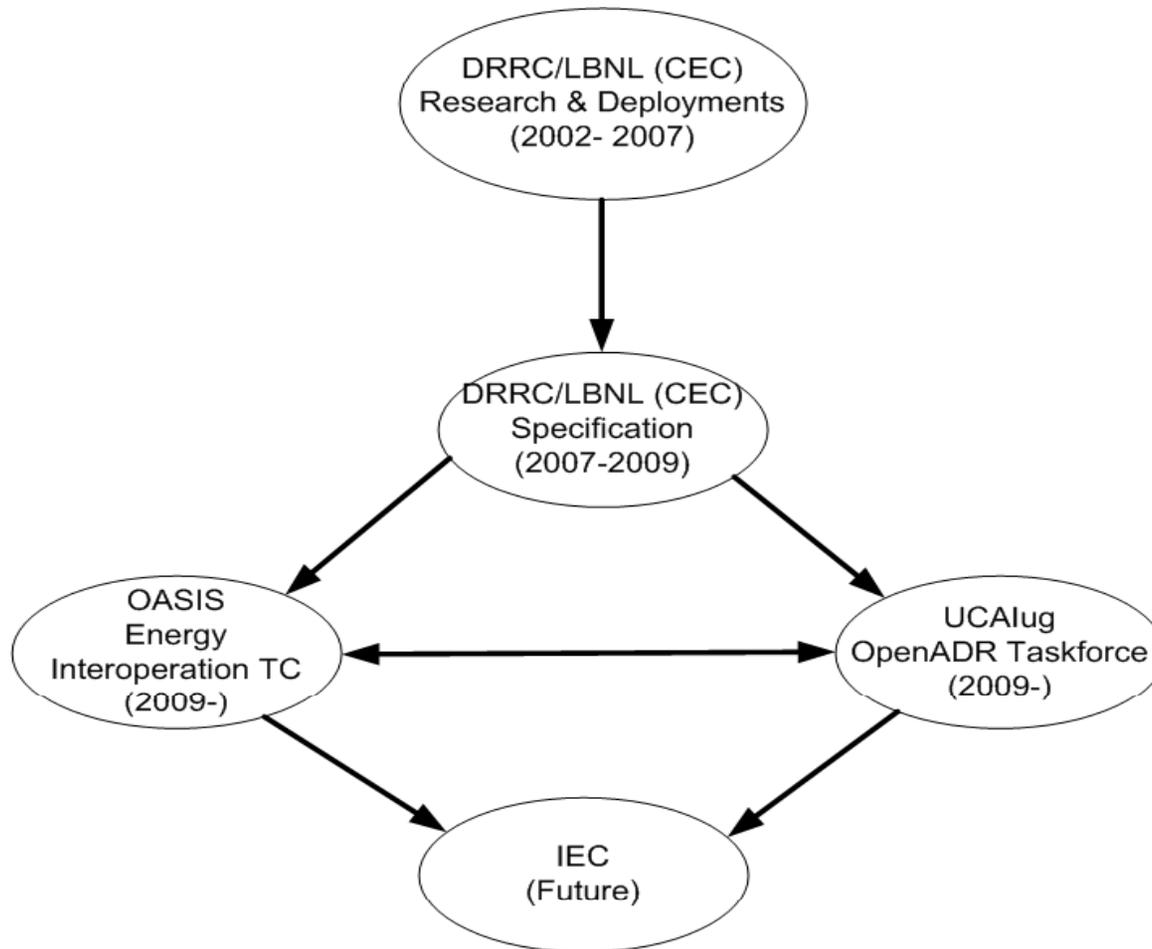– OpenADR Specification 1.0 (Ed)

– Others? (Schedules, Prices)

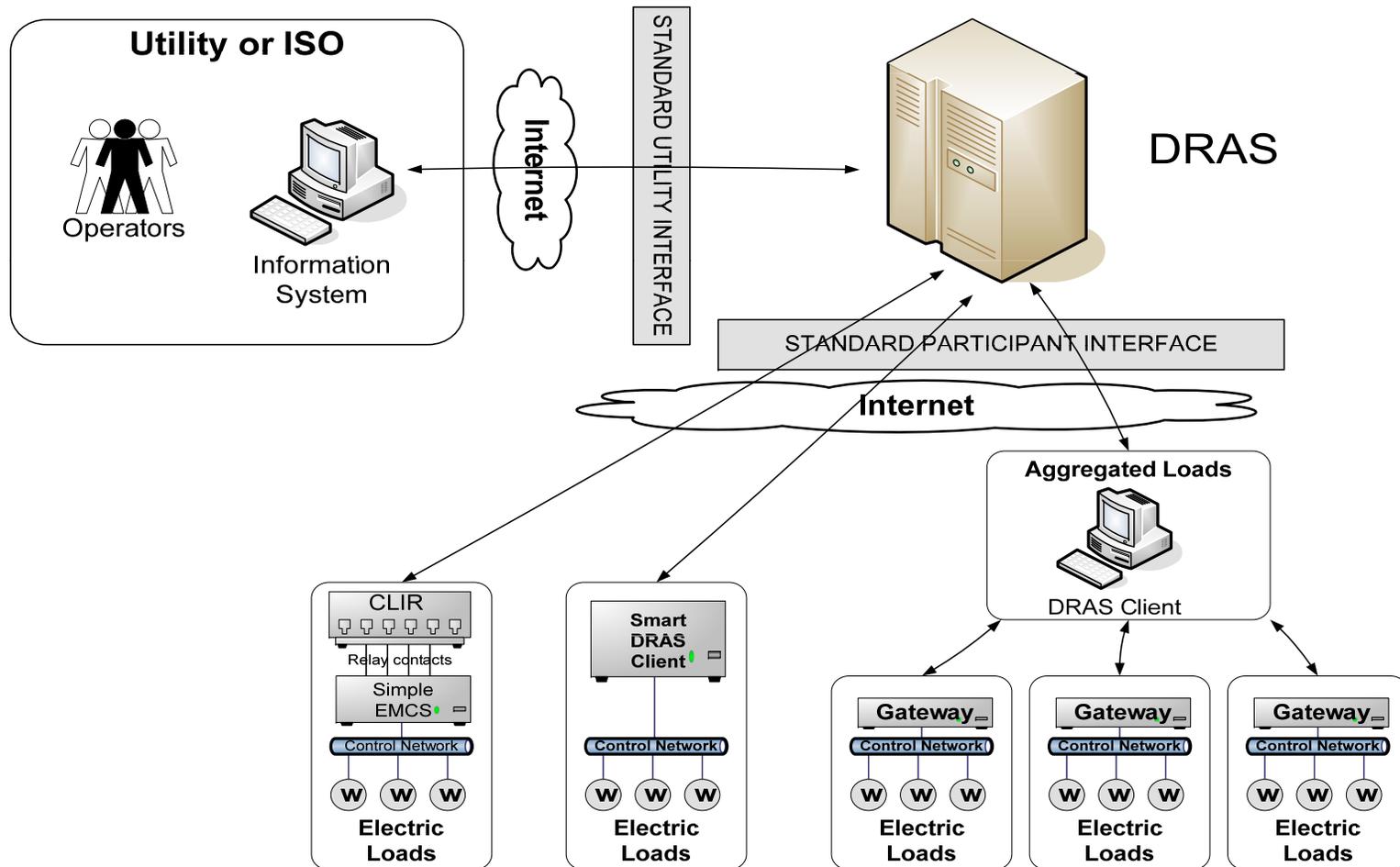# OpenADR Specification Primer

(www.openadr.org)

Conceptual Model

Deployed in numerous existing DR Programs

Operations

Markets

Service Provider

Multiple Service Providers participating in currently existing AutoDR programs

OpenADR DR Signals

Bulk Generation

Transmission

Distribution

Customer

Primarily C&I Customers (~40 Vendors)

———	Secure Communication Interface
– – –	Electrical Interface
☁	Domain

History and Status of OpenADR Specification

DRAS Concept

Utility or ISO

Operators

Information
System

Internet

STANDARD UTILITY INTERFACE

DRAS

STANDARD PARTICIPANT INTERFACE

Internet

Aggregated Loads

DRAS Client

CLIR

Relay contacts

Simple
EMCS

Control Network

W W W

Electric
Loads

Smart
DRAS
Client

Control Network

W W W

Electric
Loads

Gateway

Control Network

W W W

Electric
Loads

Gateway

Control Network

W W W

Electric
Loads

Gateway

Control Network

W W W

Electric
Loads

# Automated DR Events Uses Case
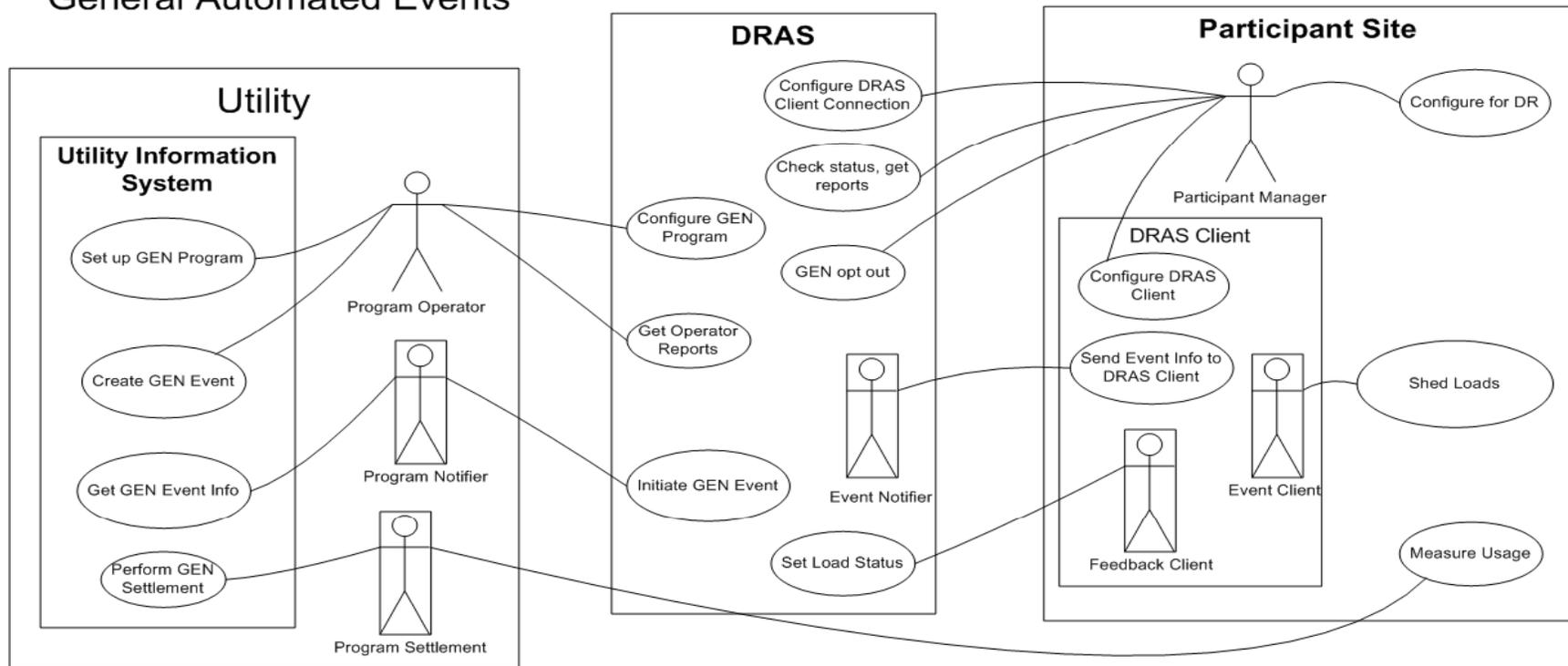
# Automated Bidding Use Case
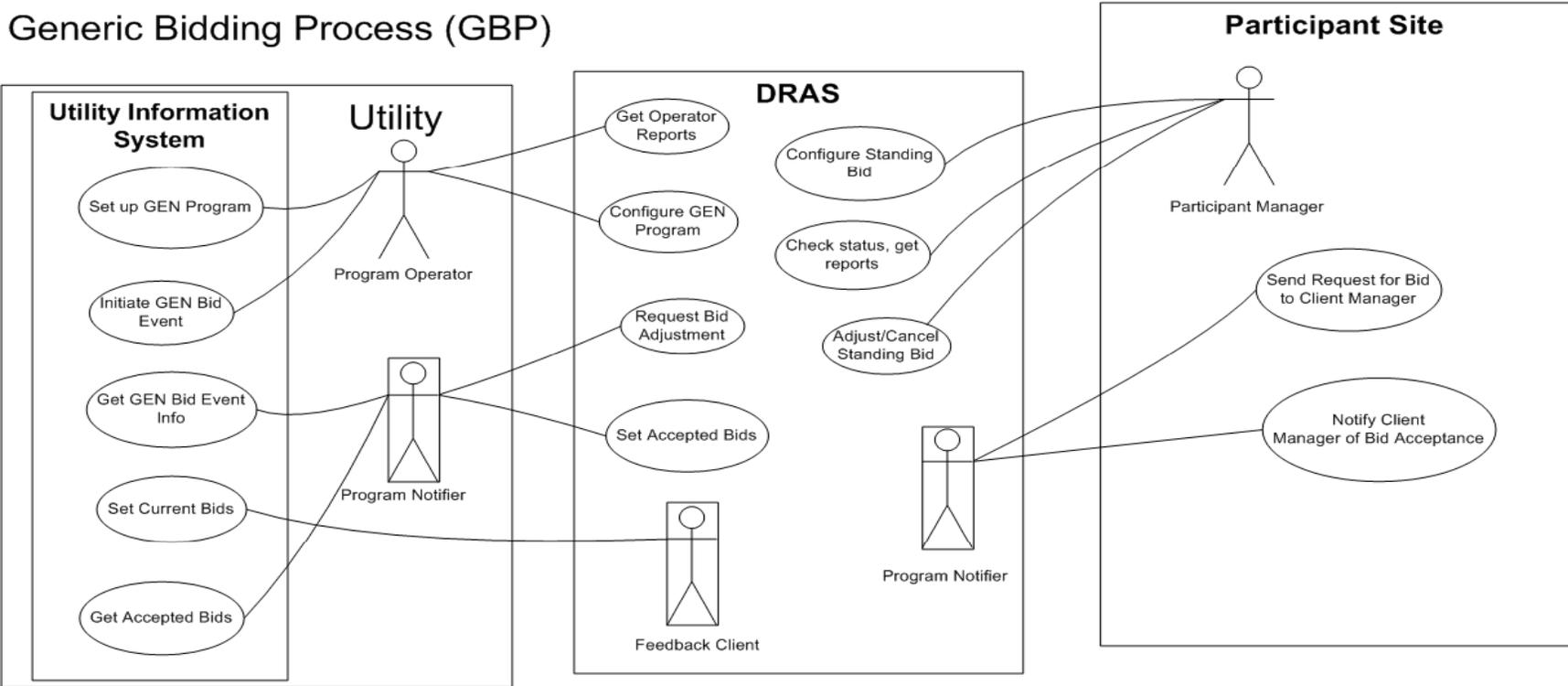
DRAS Interfaces
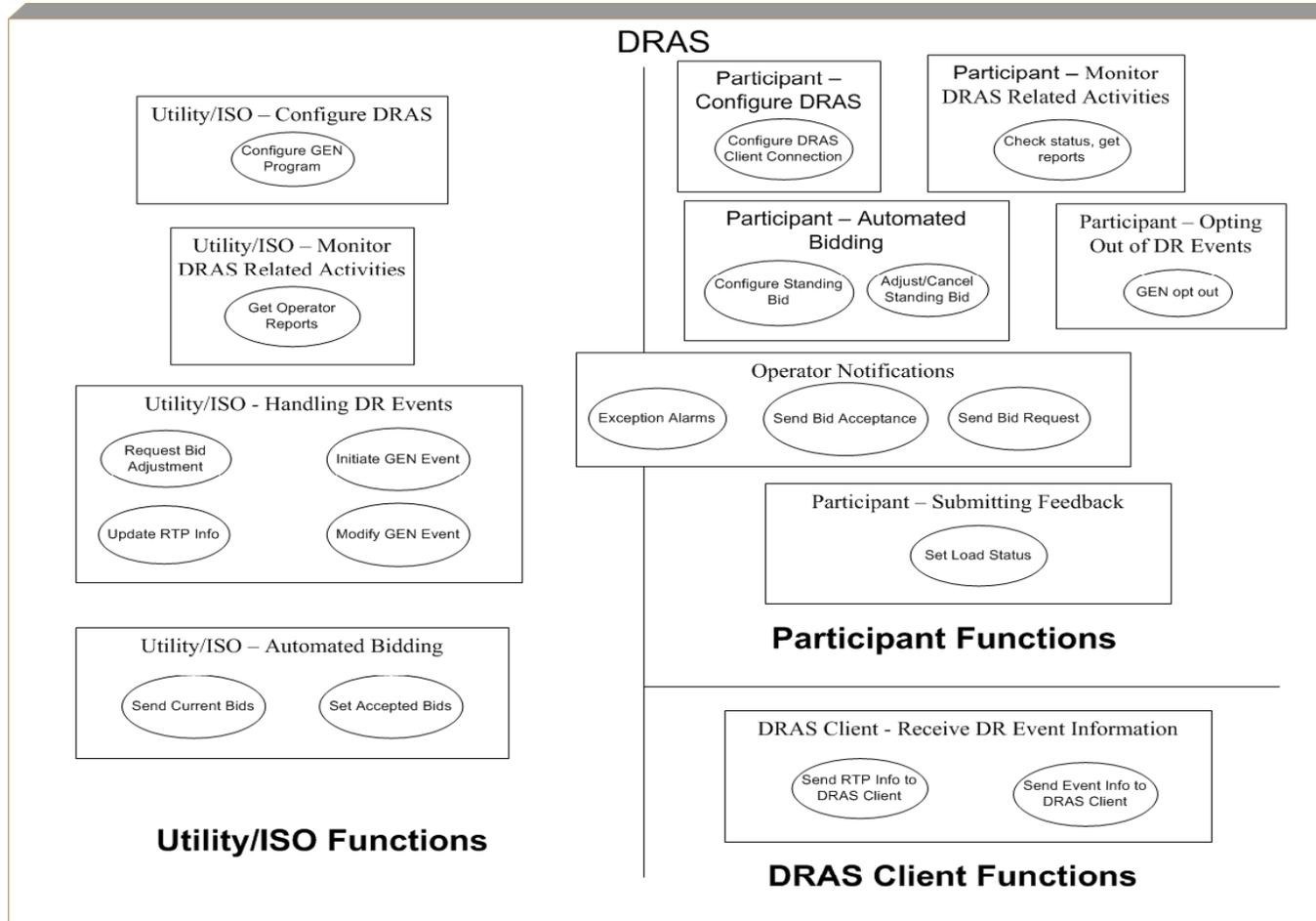
DR Event Model

(A) Issue Time – Time at which participants should be notified of an upcoming event.
(B) Start Time – Time at which the event starts.
(C) End Time – Time at which the event ends.
(D) Event Info – Program specific information that is related to the event, e.g. RTPor level.
        name value pair, start/end time, (constrained within event period). Note that the Event Info
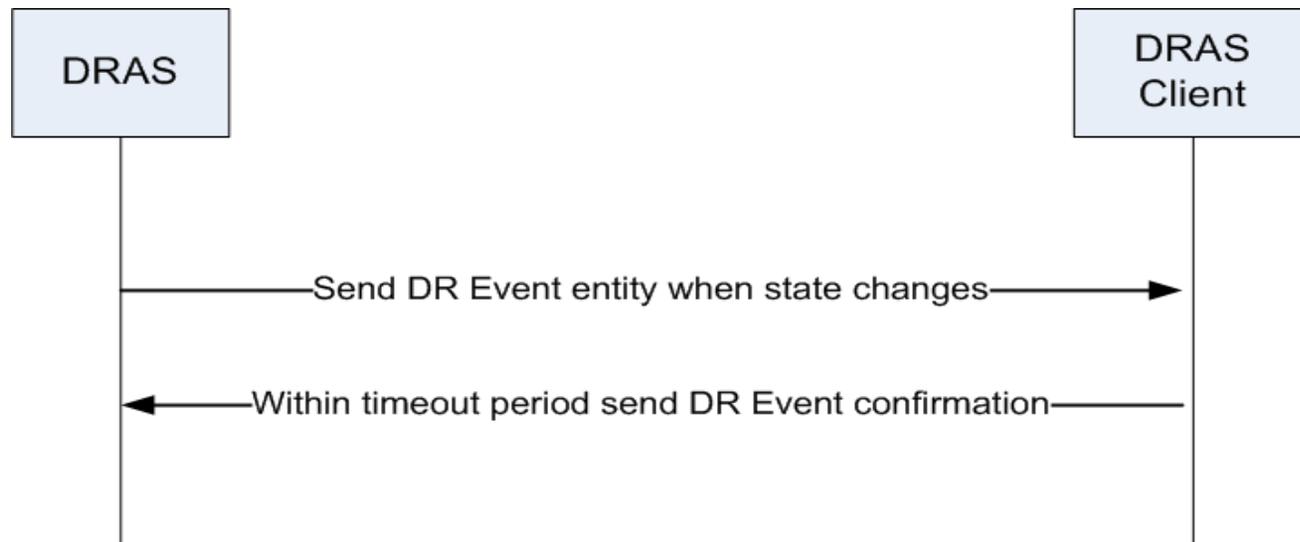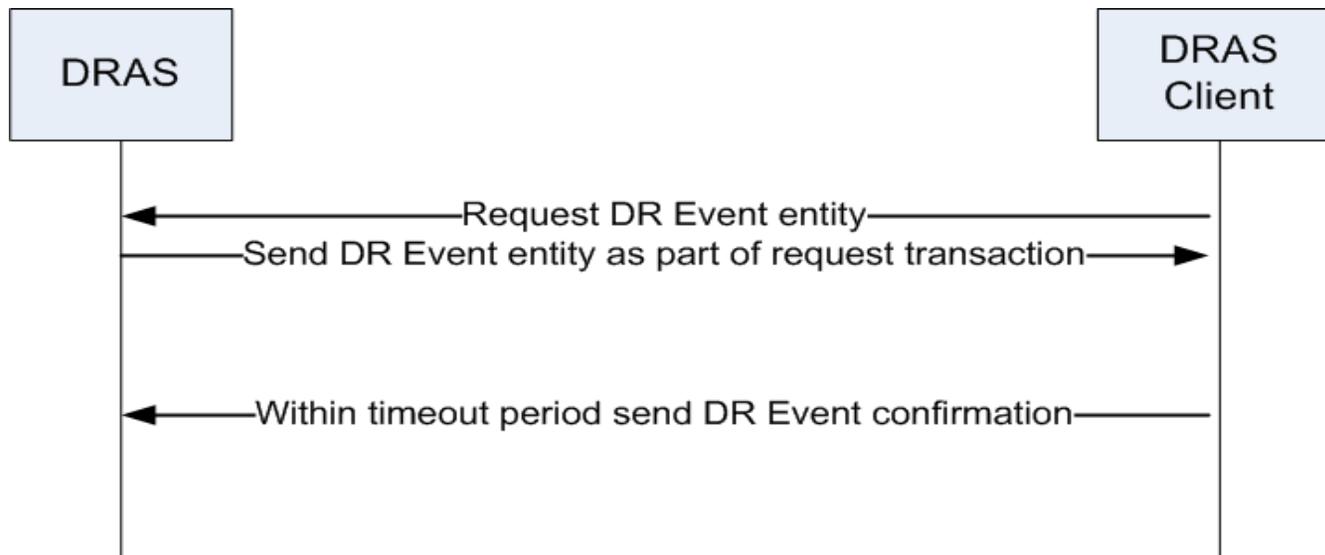may also be used to set up conditional events.
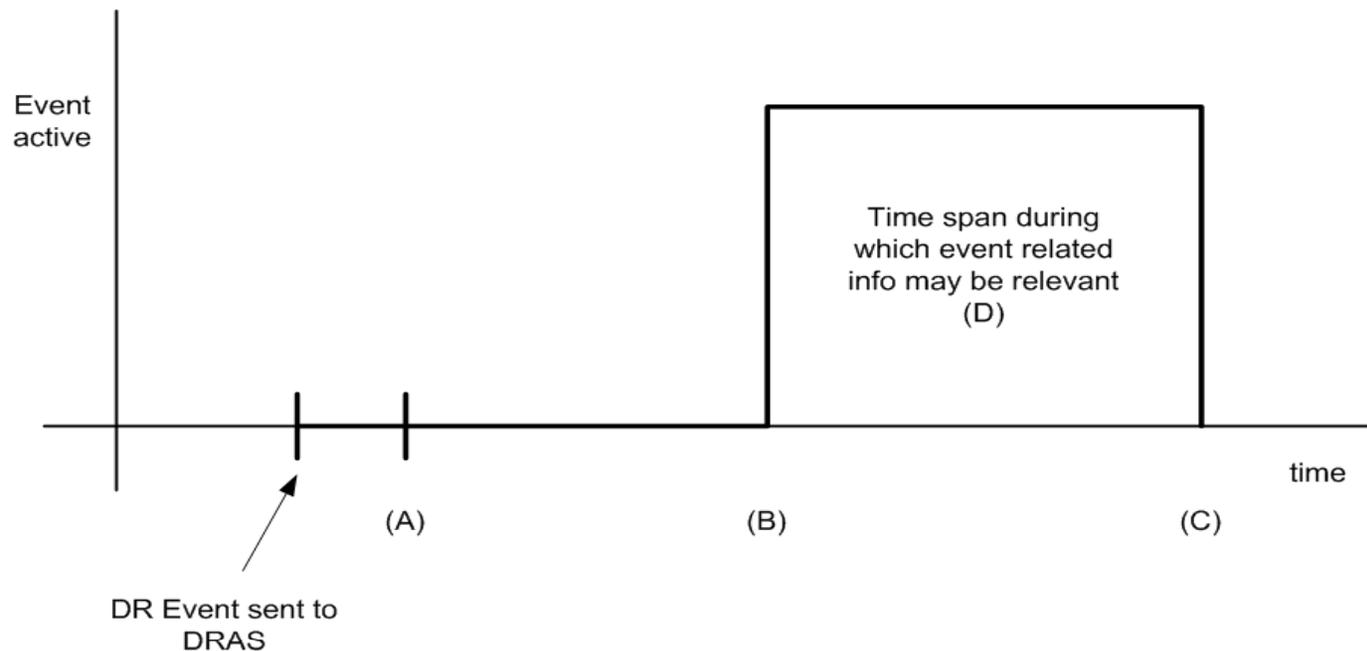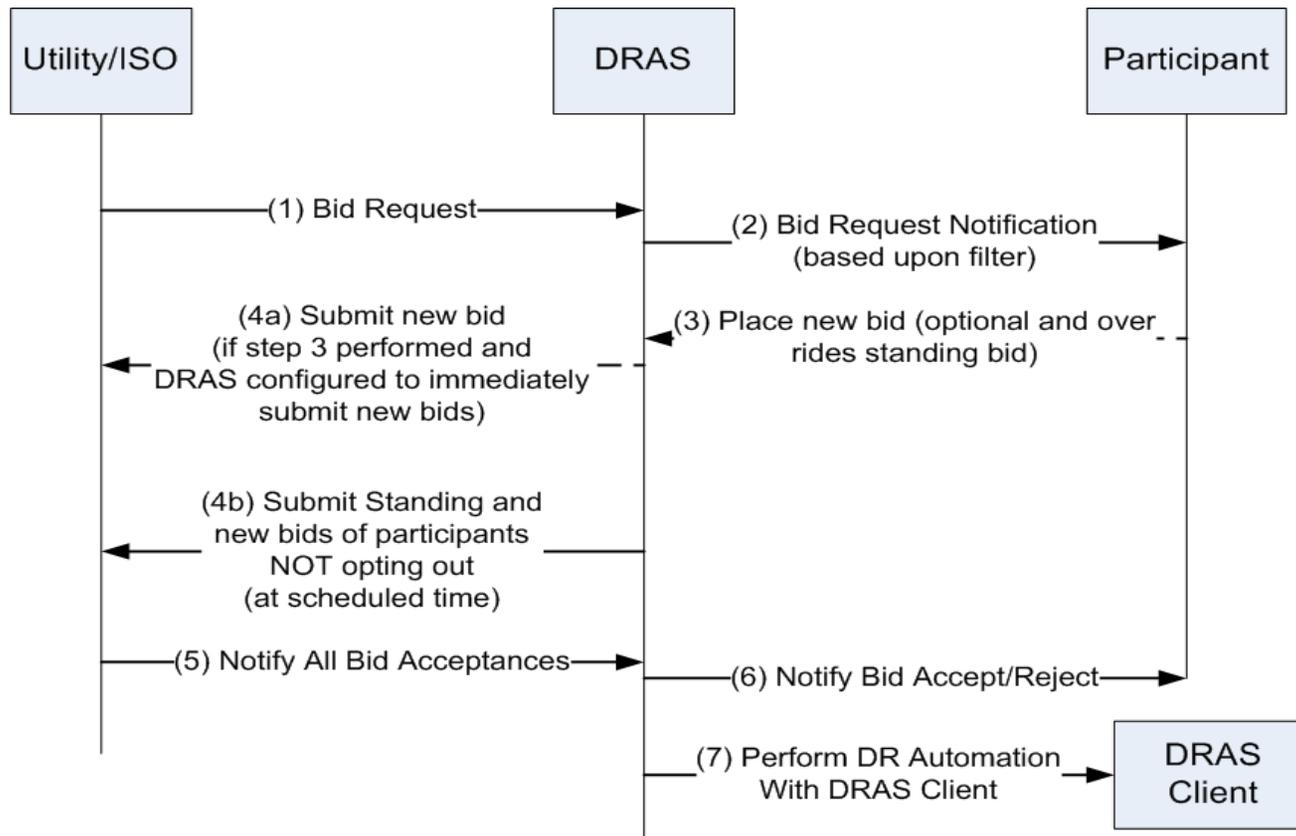
Event States
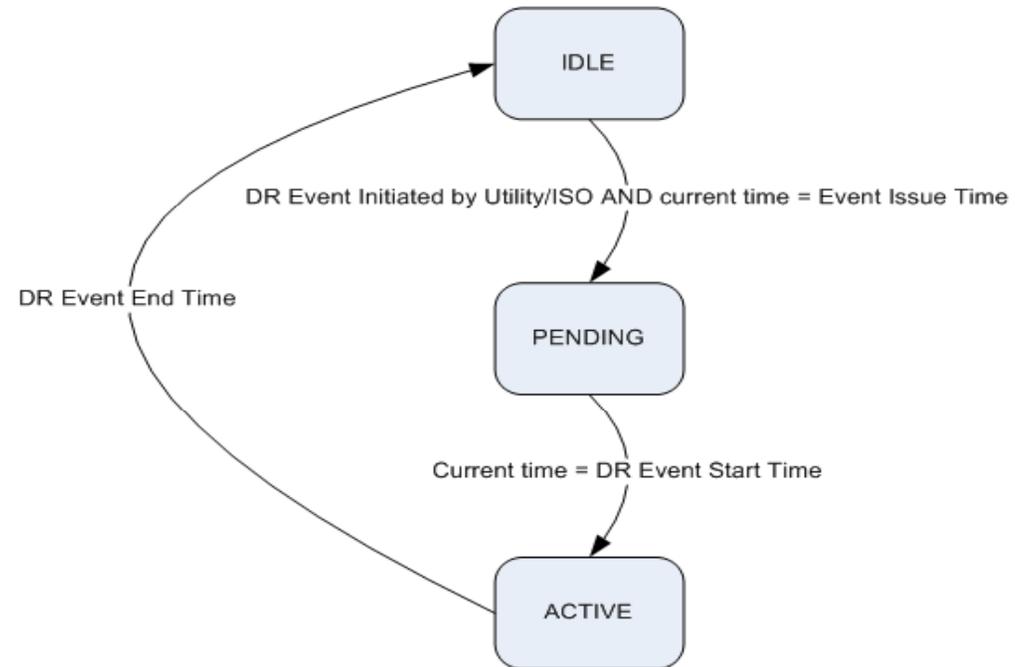
Simple DRAS Client Model
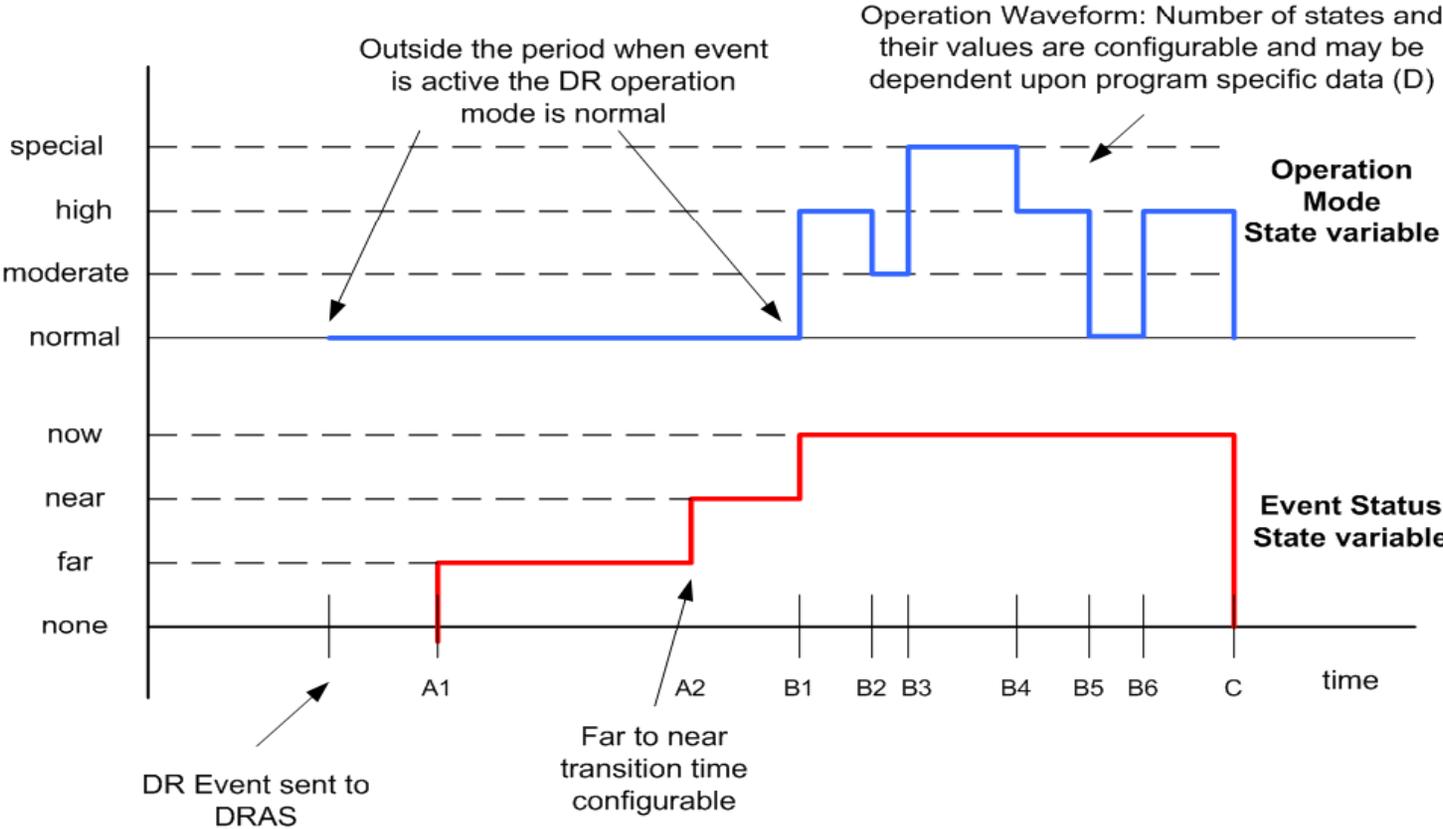
DRAS Client Interaction (PUSH)

DRAS Client Interaction (PULL)

Bidding Sequence Diagram

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- Utility or ISO interfacing their IT infrastructure to 3rd party DRAS   5, 6, 7.1, 8, 9.1, 9.2, 10
- **Control manufacturers building equipment to interface to the DRAS 5, 6.1, 6.4.3, 6.5.3, 7.2, 8.12, 9.3, 10**
- **Facility and Participant Managers   5, 6, 7.3, 8, 9.2, 10**
- Web designers and programmer building Participant user interfaces.   5, 6, 7.3, 8, 9.2, 10
- Web designers and programmer building utility user interfaces.   5, 6, 7.1, 8, 9.1, 9.2, 10
- Implementers of a DRAS   ALL