IEEE 1547.3 Overview

IEEE P1547.3 Draft Guide for Monitoring, Information Exchange and Control of Distributed Resources Interconnected with Electric Power Systems

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IEEE P1547.3 Project

Title. P1547.3 Draft Guide for Monitoring, Information Exchange and Control of Distributed Resources Interconnected with Electric Power Systems

Scope. This document provides guidelines for monitoring, information exchange, and control for distributed resources (DR) interconnected with electric power systems (EPS).

Purpose. This document facilitates the interoperability of one or more distributed resources interconnected with electric power systems. It describes functionality, parameters and methodologies for monitoring, information exchange and control for the interconnected distributed resources with, or associated with, electric power systems. Distributed resources include systems in the areas of fuel cells, photovoltaics, wind turbines, microturbines, other distributed generators, and, distributed energy storage systems.

Chairperson: Frank Goodman

Vice Chair: Joe Koepfinger

Secretary: Tom Basso

PAR approved by IEEE June 2002 (project authorization request); ballot to be completed by January 2006

IEEE P1547.3 Contents (Draft 1 7/28/04)

Introduction

1. Overview (scope, purpose, use)
2. References
3. Definitions and Acronyms
4. Background on Monitoring, Information Exchange, and Control (MIC)
5. General Guidelines
6. Business and Operations Processes
7. Information Models
8. Protocol Issues
9. Security Issues

Annexes A – E   (Bibliography; Use Case Template/Sample Cases; Data Lists?; Annotated List of Protocols; Description of Unified Modeling Language)

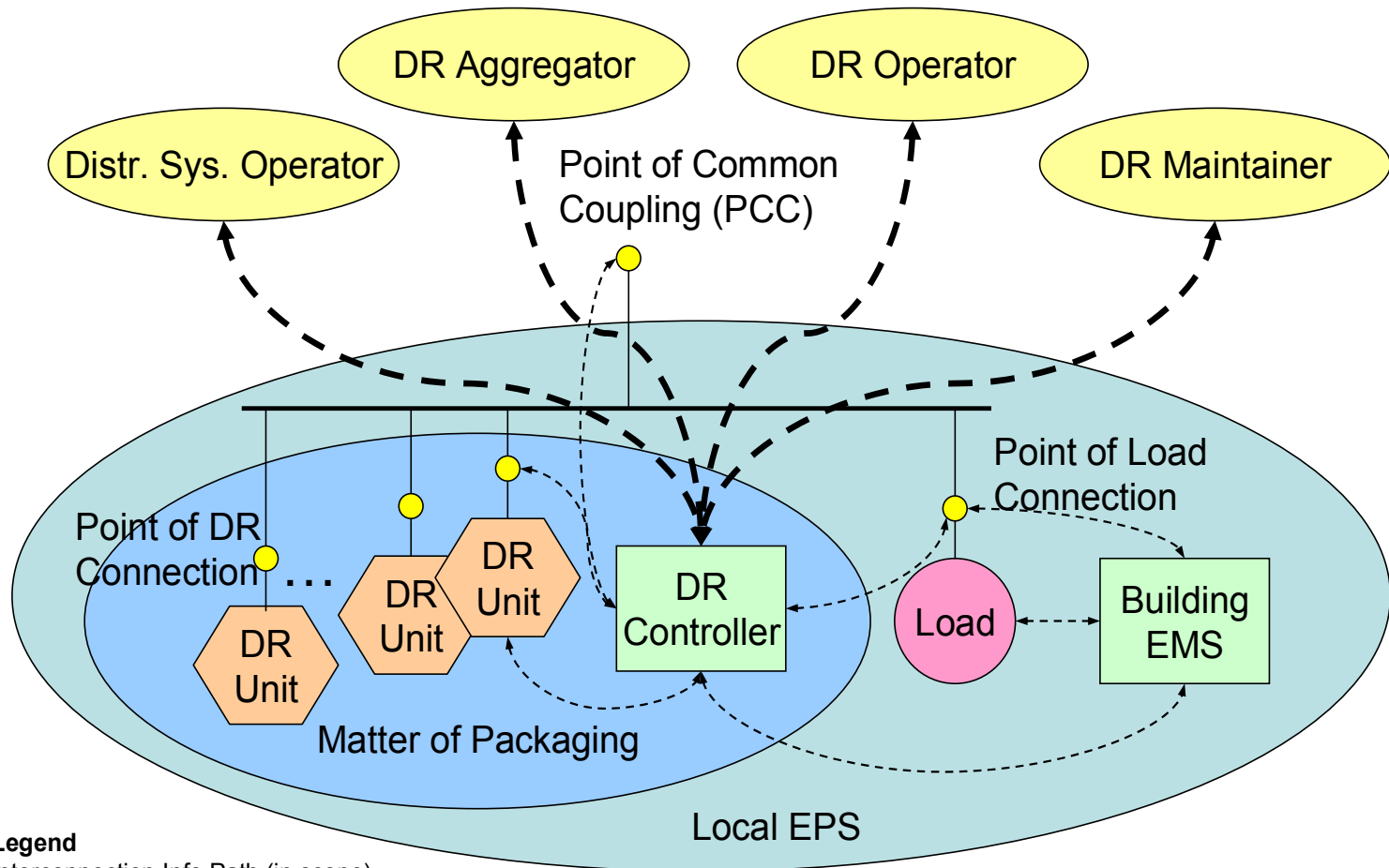NREL National Renewable Energy Laboratory

IEEE P1547.3 Guide – example draft content

This guide is for use by stakeholders in DR installations in identifying the desired information content and in implementing optional approaches for the monitoring, information exchange, and control (MIC), as needed to support the operation of DR and the transactions between the stakeholders associated with the DR. This guide is not a set of rigid requirements, but rather it is intended to facilitate the MIC development for DR installations by indicating what information may need to be considered and by recommending alternative paths for implementing MIC for key DER use cases.

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P1547.3 Guide – example draft content

Information Exchange Reference Diagram, e.g., guidance for power industry communications/specific cases of DR interconnection situations.

Legend
Interconnection Info Path (in scope) ━ ━ ━
Local Info Path (out of scope) ------------
Electric Path (out of scope) ————

P1547.3 Guide – example draft content

Stakeholder Roles Relevant to DR Interconnection
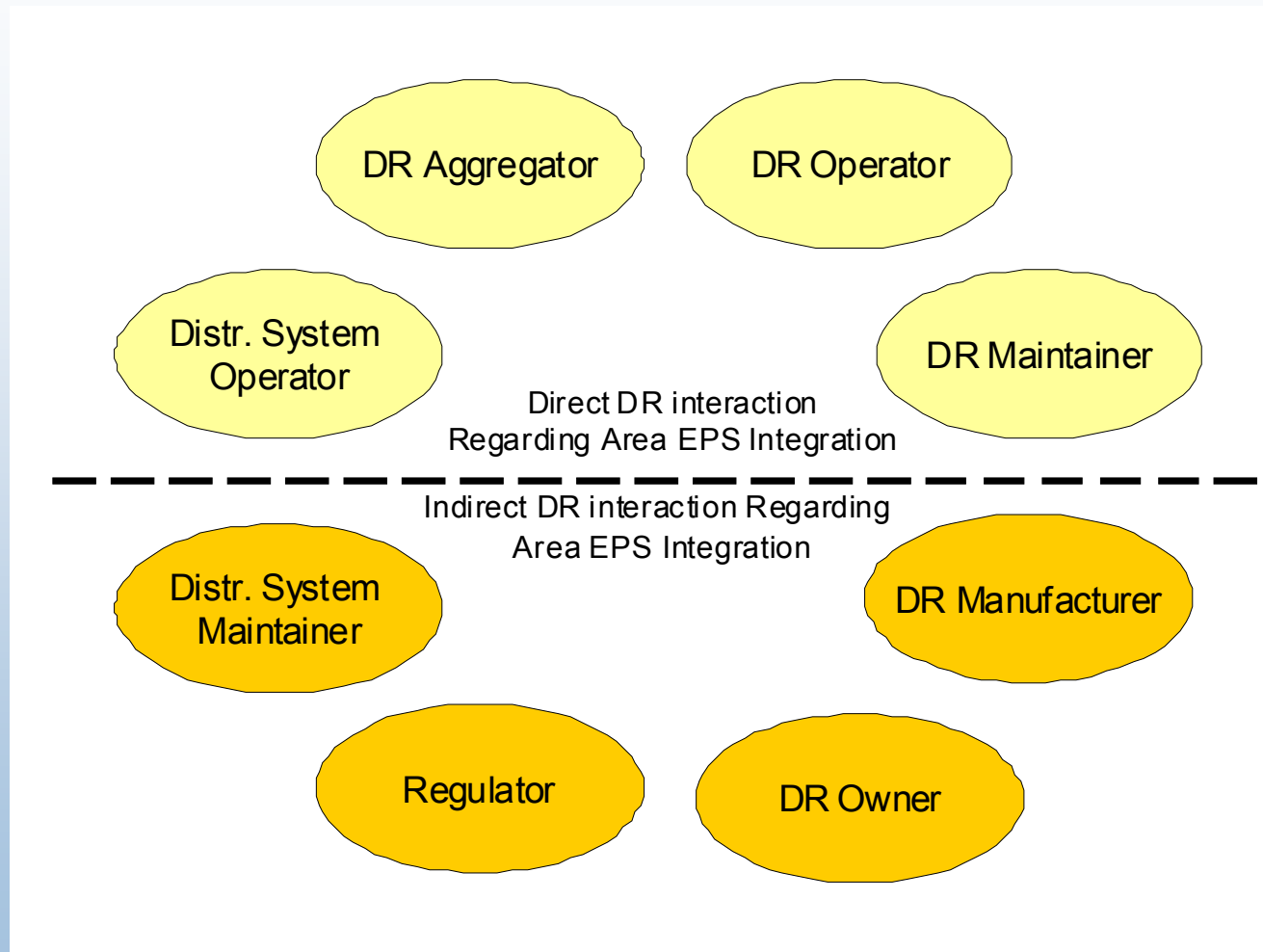
IEEE P1547.3 Guide – example draft content

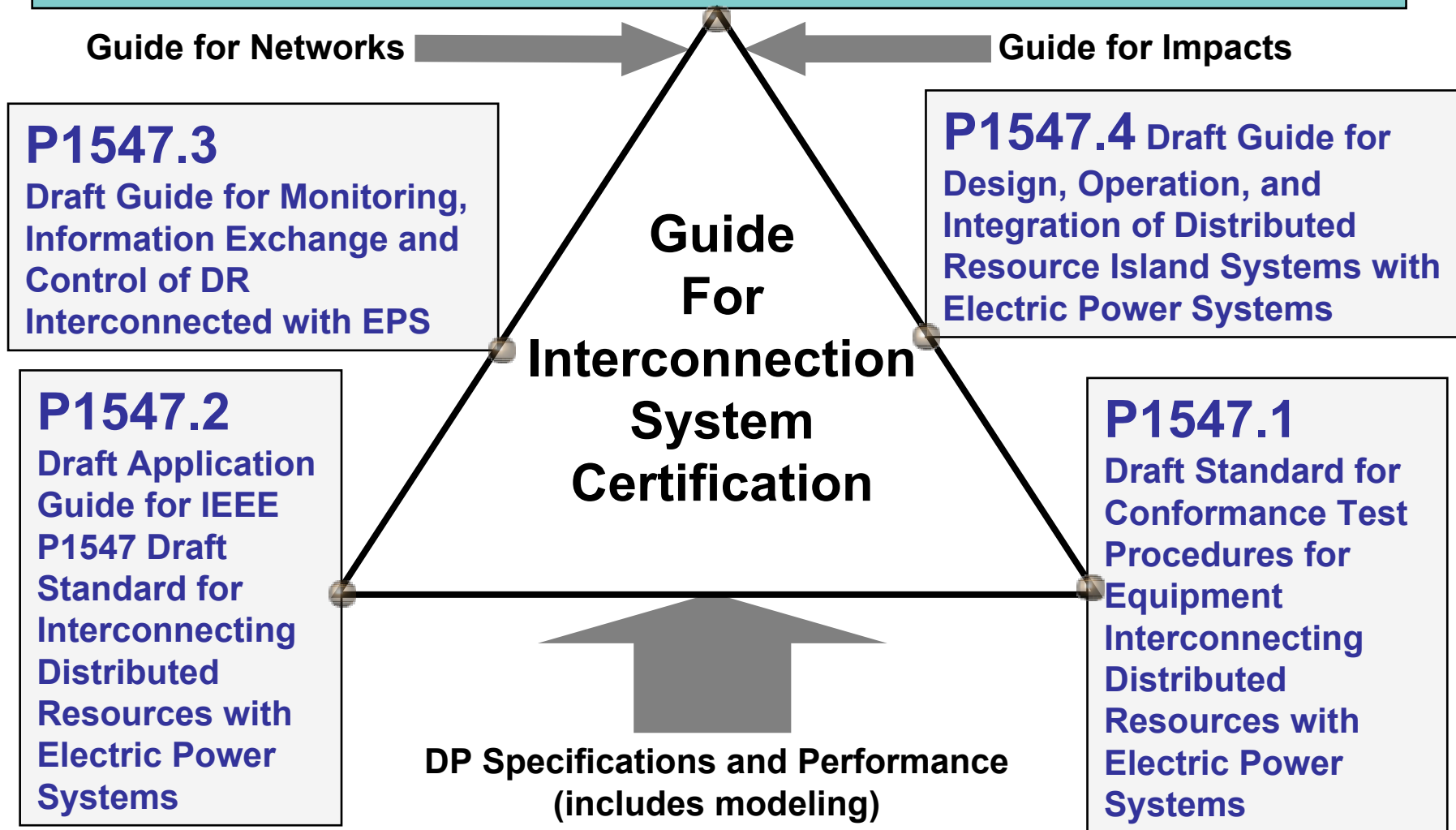**Interoperability** (major goal of P1547.3)

Interoperability is the ability of two or more devices to exchange information and to work together in a system. This is normally achieved by using published object and data definitions, standard commands and standard protocols. Interoperability also requires some level of automatic system configuration.

Interoperability reduces costs by eliminating the need for manual configuration, equipment customization and data translation. It increases reliability by eliminating data and command translation errors.

There are various levels of interoperability – for example, a limited set of capabilities may be available in a multi-vendor system, extended capabilities may be proprietary, or significant manual configuration may be required to achieve interoperability.

IEEE SCC21 1547 Series of Interconnection Standards

IEEE Std 1547™ (2003) Standard for Interconnecting Distributed Resources with Electric Power Systems

Guide for Networks ⟶ ⟵ Guide for Impacts

P1547.3 Draft Guide for Monitoring, Information Exchange and Control of DR Interconnected with EPS

P1547.4 Draft Guide for Design, Operation, and Integration of Distributed Resource Island Systems with Electric Power Systems

Guide For Interconnection System Certification

P1547.2 Draft Application Guide for IEEE P1547 Draft Standard for Interconnecting Distributed Resources with Electric Power Systems

P1547.1 Draft Standard for Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems

DP Specifications and Performance (includes modeling)

The above identifies existing IEEE SCC21 standards development projects (1547 series) and activities under discussion by SCC21 Work Group members.