Battery Program Management Document

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1 Overview

1.1 Purpose


The Program consists of the following elements:

1) Battery cell manufacturing site authorization based on on-site audit and analysis by a CTIA Authorized Test Lab (CATL) of management controls, process controls, quality systems and technical competence;

2) Battery cell product recognition based on testing and analysis by a CATL, and cell vendor declaration of compliance;

3) Battery pack product recognition based on testing and analysis by a CATL, and pack vendor declaration of compliance;

4) Adapter product recognition/certification based on testing and analysis by a CATL, and adapter vendor declaration of compliance;

5) System certification based on use of recognized subsystems, System test and analysis by a CATL, and a System Vendor declaration of compliance

1.2 Scope

This Battery Program Management Document (BPMD) defines the requirements and processes of the Program. For cell and pack vendors, this document describes the requirements for obtaining and maintaining product recognition. For adapter vendors, this document describes the requirements for obtaining and maintaining product recognition and product certification. For System Vendors, this document describes the requirements for obtaining and maintaining System certification. For test laboratories, this document describes the requirements to become a CTIA Authorized Testing Laboratory (CATL) and the procedures to evaluate vendors' products.

1.3 Disclaimer

CTIA and the CATL make no representations that a certified System or a recognized Subsystem will operate free from defect, without error or according to its applicable design and technical standards.

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1 IEEE Std 1725 is a registered trademark of the Institute of Electrical and Electronics Engineers, Inc.
2 IEEE Std 1625 is a registered trademark of the Institute of Electrical and Electronics Engineers, Inc.
1.4 Definitions

Note: the following definitions may differ from the definitions in IEEE 1725 and IEEE 1625.

Adapter: A device or combination of devices in the power path that transforms the available power from an external source (e.g. a wall outlet, airline or automobile outlet, etc.) to the power used by the host (an adapter is often referred to as a power supply). Adapters may be either Recognized or Certified.

Adapter Simulator: An assembly which simulates an Adapter for System level evaluation of Systems certified without a known Adapter.

Battery/Battery Pack: An assembly of any number of Li-Ion or Li-Ion Polymer cells, associated electronics, battery packaging and connector(s).

BPMD: Battery Program Management Document.

CATL Worksheets: A set of Microsoft Excel worksheets, based on the current CRSL, to be completed by the Subsystem vendor and the CATL, serving as a submission form and itemization of compliance results.

CATL: CTIA Authorized Test Lab with scope of Battery Certification. For this Program, the CATL will be authorized by CTIA to perform all the requirements in the applicable CRD (i.e., both testing and auditing). CATLs will be authorized to conduct evaluations to either the CTIA Certification Requirements for Battery System Compliance to IEEE 1725 and/or the CTIA Certification Requirements for Battery System Compliance to IEEE 1625.

Cell: Basic manufactured Li-Ion or Li-Ion Polymer unit providing a source of electrical energy by direct conversion of chemical energy that consists of electrodes, separators, electrolyte, container and terminals, and that is designed to be charged electrically.

Certified Adapter: An Adapter approved by CTIA as meeting the requirements of the Program for a Certified Adapter. The adapter may have a permanently connected or detachable output cable. The output cable shall terminate with a USB-IF Micro-B connector. The adapter may also be known as a Common Power Supply (CPS).

Certified System: A System approved by CTIA as meeting the requirements of the Program.

CRD: Certification requirements Document. There is a CRD for IEEE 1725 and a CRD for IEEE 1625.

CRSL: Certification Requirements Status List. There is a CRSL for IEEE 1725 and a CRSL for IEEE 1625.

Declaration of Compliance: A signed declaration stating that the System or Subsystem complies with all applicable provisions of IEEE 1725 or IEEE 1625.

Embedded Pack: A non-user replaceable pack.

Host: A device that is powered by a battery and/or charges the battery. Mobile phones, netbooks and charger-only devices are examples of a host device.

Host Simulator: An assembly which simulates a Host for System level evaluation of an Adapter to be Certified without a known Host.
Hybrid: A Subsystem that cannot be assigned to a single Subsystem category, but utilizes multiple categories and may also exhibit characteristics of a Host.

Operator: A provider of Commercial Mobile Radio Services as defined by the FCC.

Recognized Subsystem: A Cell, Battery Pack or Adapter that is in compliance with the requirements of this document.

Subsystem: a Cell, Battery Pack, Adapter or Hybrid.

System: A combination of cell(s), battery pack(s), host, and adapter(s). The System may also include Hybrid devices.

Subsystem Compliance Folder: The Declaration of Compliance, CATL evaluation report and CATL worksheets.

Subsystem Vendor: A supplier of a Subsystem.

System Compliance Folder: The Declaration of Compliance, CATL evaluation report and CATL worksheets.

System Vendor: A supplier of a System. For the purposes of this document, only a Host supplier may be a System Vendor.
2 Roles and Responsibilities

This section describes the roles and responsibilities of the parties involved with the Program and mentioned throughout this document.

2.1 Subsystem Vendor

Vendors shall ensure that their Subsystems are evaluated for compliance to IEEE 1725 or IEEE 1625 by a CATL.

Vendors shall ensure that their Cell manufacturing sites are evaluated for compliance to IEEE 1725 and/or IEEE 1625 by a CATL.

Subsystem recognition requests and Adapter certification requests shall be submitted to CTIA. Only Subsystem Vendors may submit these types of requests.

Vendors shall pay a fee to CTIA (see APPENDIX A: CTIA Recognition and Certification Fees) for recognition of a Subsystem or certification of an Adapter.

Vendors may select any CATL for the evaluation and are responsible for any required contracts and non-disclosure agreements with their suppliers and the CATL. Vendors are free to select different CATLs for evaluation of subsystems and manufacturing site audits or to change CATLs at their option. Any issues regarding the performance of a CATL may be brought to the attention of CTIA.

Vendors shall be responsible for the fees associated with the CATL evaluation. These fees will be independently determined by each CATL.

2.2 System Vendor

System Vendors shall evaluate their System for compliance to IEEE 1725 or IEEE 1625 by using criteria set forth in the CTIA Certification Requirements for Battery System Compliance to IEEE 1725 document or CTIA Certification Requirements for Battery System Compliance to IEEE 1625 document (CRD) in accordance with the applicable version of the Certification Requirements Status List (CRSL).

Vendors shall submit System certification requests to CTIA. Only System Vendors may submit System certification requests.

Vendors shall pay a fee to CTIA (see APPENDIX A: CTIA Recognition and Certification Fees) for certification of a System.

Vendors may select any CATL for the evaluation and are responsible for any required contracts and nondisclosure agreements with their suppliers (e.g., pack vendor, cell vendor, adapter vendor) and the CATL.

Vendors shall be responsible for the fees associated with the CATL evaluation. These fees will be independently determined by each CATL.
2.3 CTIA

As owner of the Program, CTIA defines the requirements for CTIA recognition and certification; administers the overall program; authorizes CATLs; reviews recognition and certification applications; awards CTIA recognition and certification to the vendor; and maintains product compliance folders for Recognized Subsystems and Certified Systems.

2.4 CATL

CATLs shall evaluate Systems, Subsystems and manufacturing sites using criteria set forth in the CRD in accordance with the applicable version of the CRSL. CATLs shall at all times maintain compliance with the Policies and Procedures for CTIA Authorized Testing Laboratories document. Interested organizations may contact CTIA to obtain a copy of this document.

A current listing of CATLs can be found within the CTIA certification database and on the CTIA web site at http://www.ctia.org/business_resources/certification/test_labs/.
3 Subsystem Recognition Process

3.1 Introduction

To obtain recognition of a Subsystem, the Subsystem vendor submits a recognition request to CTIA. The vendor selects a CATL to evaluate compliance to IEEE 1725 or IEEE 1625 using criteria set forth in the CRD in accordance with the applicable version of the CRSL. The CATL evaluates compliance and provides an evaluation report to CTIA. The vendor submits a Declaration of Compliance and pays a recognition fee to CTIA. For cells, the manufacturing site(s) must also be evaluated by a CATL and authorized by CTIA. CTIA recognizes the Subsystem when all steps are complete.

See APPENDIX K: Process Flowchart for an overview of the process.

3.2 Subsystem Recognition Request

Vendors shall submit Subsystem recognition requests via CTIA’s online certification database at https://cpo.ctia.org/. User login accounts may be requested by selecting “I need a user name and password” on the login page.

Once logged into the certification database, the Vendor shall select the appropriate request type: from the Recognition/Audit Request drop-down list:

For IEEE 1725 Compliant Subsystems:
- Cell Recognition Request – 1725
- Pack Recognition Request – 1725
- Embedded Pack Recognition Request – 1725
- Adapter Recognition Request – 1725
- Hybrid Recognition Request – 1725

For IEEE 1625 Compliant Subsystems:
- Cell Recognition Request – 1625
- Pack Recognition Request – 1625
- Embedded Pack Recognition Request – 1625
- Adapter Recognition Request – 1625
- Hybrid Recognition Request – 1625

The vendor shall select “Initial” Request Type and enter information about the Subsystem.
For cells, the vendor shall identify the site(s) where the cell is manufactured. If the cell is manufactured in multiple sites, those sites shall all be identified on the request. Only authorized sites may be selected (see Section 3.4 of this document).

For packs, including embedded packs, the vendor shall identify the site(s) where the pack is manufactured. The vendor shall also identify the cell(s) used in the pack. If a cell is already recognized, it will appear on a drop-down list. If a cell is not yet recognized, the vendor shall check the “Pending Recognition” box (the pack can be recognized only after that cell becomes recognized, however).

For adapters, the vendor shall identify the site(s) where the adapter is manufactured.

For devices that do not exactly fit the category of pack or adapter (e.g., a battery-powered DC-DC converter, an external battery with self-contained charging circuitry, a hybrid charger/adapter), the vendor shall select “Hybrid Recognition Request”.

Multiple models may be submitted in a single request provided there are no differences that impact the requirements of this Program.

The vendor shall select a CATL and request a start date.

The vendor shall upload a signed and scanned Declaration of Compliance for IEEE 1725 (see APPENDIX C: Subsystem Declaration of Compliance – IEEE 1725) or Declaration of Compliance for IEEE 1625 (see APPENDIX D: Subsystem Declaration of Compliance – IEEE 1625). Submission of a hardcopy of the declaration by vendor shall not be required.

CTIA will invoice the vendor for the CTIA fees as described in APPENDIX A: CTIA Recognition and Certification Fees. Vendor shall inform CTIA if a P.O. number is required on the invoice.

The CATL will receive an e-mail notification of the recognition request. The CATL will log into the database (https://cpo.ctia.org/) to review and accept/reject the request. The database will send an e-mail notification to the submitter once the CATL has accepted/rejected the request. If the request is rejected, the submitter may re-assign the request to another CATL.

Once the request has been accepted by the CATL, the vendor may no longer make changes to the request. The vendor shall contact the CATL or CTIA if any changes need to be made to the data entered.

### 3.3 CATL Evaluation

The vendor shall provide, as appropriate, declarations, design data, manufacturing data, test data, test reports, audit reports, test samples and device specifications as required for the CATL to complete its evaluation.

For cells, a set of test samples (as defined in the CRD) shall be provided from each manufacturing site.

For packs, a set of test samples (as defined in the CRD) for each combination of pack manufacturing site and cell model shall be submitted.

- Should the pack contain multiple revisions of the cell or same cell revision from multiple manufacturing sites, only one revision of the cell or a cell from one manufacturing site needs to be considered for testing at the pack level. The vendor shall ensure the cell revision or cell manufacturing site being tested represents the worst-case scenario for
pack recognition and is currently recognized. Should the pack contain multiple cell models, each cell model shall be tested at the pack level.

- Should pack manufacturing sites use identical processes, as reviewed and agreed upon by the CATL, a full set of test samples from each site may not be required. To make this determination, the pack assembler shall provide 2 battery packs from each alternative pack manufacturing site for inspection, along with a declaration that the assembly and test processes are identical between the manufacturing sites.

If a pack and cell are undergoing parallel recognition at different CATLs, the pack vendor shall supply a signed declaration to the CATL conducting the pack review. The declaration shall indicate that the cell evaluated within the pack is identical to the cell that achieved recognition.

The CATL shall use the Certification Requirements Status List (CRSL) to determine the applicable recognition steps.

After accepting the request, the CATL shall work with the vendor to conduct an evaluation, which might include testing samples, reviewing supplied evidence or conducting an on-site audit. The evaluation may start only after the vendor has entered the request into the database and the CATL has accepted the request.

Non-compliances will be resolved between the CATL and the vendor.

Should the CATL identify a potential problem with a requirement, it shall issue a Change Request (CR), with adequate justification, proposing a change in category status. The CR shall be sent to all active CATLs for review. The CATLs shall have 5 business days to comment on the CR. Comments arguing against the change shall include adequate justification. Upon mutual resolution of any comments, the requirement may be changed.

Test results from similar products may be used at the CATL’s judgment. The CATL shall provide justification in the evaluation report for using these results.

Upon completion of the evaluation, the CATL shall log into CTIA’s online certification database and:

- Enter the CRSL version used for the evaluation (the version to be used is one that is active on the date the evaluation report is uploaded to the database)

- Verify the Subsystem information (correcting and updating as necessary). If the vendor selected the “Hybrid Recognition Request” type when entering the subsystem request, the CATL will categorize the device as a pack, adapter or both (and will enter any additional required information).

- Enter the start and end dates of the review

- Upload the CATL evaluation report and the completed CATL Worksheets (the report and worksheets shall not contain any confidential/proprietary technical information). The vendor may then view and download these documents via the database.

The CATL evaluation report shall have a cover page with the company logo and shall include the following information:

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3 An on-site audit may be required to evaluate a subsystem. The audit is product-specific and augments the manufacturing site authorization audit.
1) Subsystem Vendor name, model number, revision number and capacity (as appropriate) for each Subsystem evaluated

2) Review date(s)

3) IEEE 1725 or IEEE 1625 version, and CRSL versions

4) Summary of review

5) Person(s) who conducted evaluation

6) Contact point

7) Lab accreditation identifier (issued by accreditation body), CATL authorization code

8) Signature of authorized representative

CATL evaluation reports, CATL worksheets, and declarations will be accessible by the vendor via CTIA's online certification database and retained by CTIA for a period of 5 years from the date of recognition, after which all documentation will be destroyed.

Unless authorized by the Subsystem Vendor, the Compliance Folder will be maintained in confidence by CTIA.

### 3.4 Cell Manufacturing Site Authorization

Cell vendors shall select a CATL to audit their manufacturing sites in accordance with the applicable version of the CRSL. The vendor shall determine what constitutes the manufacturing site and provide a description to the CATL.

Vendors shall submit manufacturing site audit requests via CTIA's online certification database at [https://cpo.ctia.org/](https://cpo.ctia.org/). The vendor shall select either Site Audit Request - 1725 or Site Audit Request - 1625, select "Initial" Request Type and enter information about the manufacturing site. The vendor shall select a CATL and request a start date.

Upon completion of the audit, the CATL shall log into CTIA's online certification database and:

- Enter the CRSL version used for the audit (the version to be used is one that is active on the date the audit report is uploaded to the database)
- Verify the site information (correcting and updating as necessary)
- Enter the start and end dates of the audit
- Link the audit request to another audit request, if necessary
- Upload a summary audit report, which will include:
  - Cell Manufacturing Site name
  - Cell Manufacturing Site address
- A judgment of whether the site audited complies with IEEE 1725 or IEEE 1625 using criteria set forth in the CRD
- Review date(s)
- IEEE 1725 or IEEE 1625 version, and CRSL version
- Summary of review
- Detail whether this audit is linked to another site audit
- Person(s) who conducted audit

CTIA will authorize those sites that are in compliance, as recommended by a CATL.

Cells can only be recognized once the sites where they are manufactured are authorized by CTIA.

Once authorized, the vendor shall evaluate all manufacturing process changes to determine if any processes within the scope of IEEE 1725 or IEEE 1625 have been changed. Processes within the scope of IEEE 1725 or IEEE 1625 that have been changed shall be communicated to the CATL by the vendor, along with applicable supporting evidence. The CATL shall determine whether another audit is required to assist in its evaluation of the supporting evidence. Should an audit be required, the vendor shall submit a site audit request via CTIA’s online certification database at https://cpo.ctia.org/, selecting the “Update/Renewal” Request Type. Upon completion of the evaluation, the CATL shall log into CTIA’s online certification database and upload a summary report, which will include the information above. If, in the CATL’s judgment, the sites no longer comply, cells manufactured at those sites may no longer be submitted for recognition.

Manufacturing sites shall be re-audited on an annual basis (i.e., 12 months from the last full audit, which is identified in the certification database as “Date Authorized”). The vendor shall submit a site audit request via CTIA’s online certification database at https://cpo.ctia.org/, selecting the “Update/Renewal” Request Type.

Sites not re-audited after the 12-month period will be removed from the list of authorized cell manufacturing sites; cells manufactured at those sites may no longer be submitted for recognition.

3.5 Recognition

Upon completion of the following items, a Subsystem will be recognized:
- CATL evaluation report and completed CATL Worksheets uploaded by the CATL
- Signed Declaration of Compliance uploaded by the vendor
- Manufacturing site authorization (for cells)
- Payment of the CTIA recognition fees
- Fully executed Subsystem Recognition Agreement (see APPENDIX E: Subsystem Recognition Agreement)
3.6 Changes to Recognized Subsystems

Once a Subsystem is recognized, the vendor shall evaluate any changes within the Subsystem that fall within the scope of IEEE 1725 or IEEE 1625 to determine whether the changes impact the recognition. Changes that do impact the recognition shall be submitted as an ECO (by logging into the CTIA certification database, selecting Submit New Request and choosing “ECO” Request Type), identifying the new Revision # of the Subsystem. Supporting evidence shall be provided to the CATL. For any changes, the current revision of the CRSL and CRD shall be used; in addition a gap analysis must be performed by the CATL between the CRSL and CRD used for the most recently approved request and the current CRSL and CRD. Additional documentation and/or testing may be required if any requirements have changed.

Once a Subsystem is recognized, any required changes to the subsystem model number in the certification database shall be submitted as a new Initial request.

A change in the capacity of either a cell or a pack constitutes a new model. A new Initial request shall be submitted, with a new model number.

3.7 De-Listing

Subsystem vendors may at any time request de-listing of a recognized Subsystem. One reason for doing this would be to remove from the database drop-down selections products that are no longer on the market. Another reason would be to notify CTIA of Subsystems that are no longer in compliance. The vendor shall send an e-mail to certification@ctia.org and include the manufacturer name, model #, revision # and reason for requesting de-listing.

If the reason is that the product is no longer on the market, CTIA will remove the Subsystem from the recognized Subsystem drop-down selections in the certification database so that it can no longer be chosen when a new request is entered. The Subsystem will still appear on the Subsystem recognition list.

If the reason is that the product is no longer in compliance, CTIA will withdraw the recognition as well as remove the Subsystem from the Subsystem recognition list and recognized Subsystem drop-down selections in the certification database. CTIA will make its best effort to contact the vendors and operators listed in its certification database who may be impacted.

3.8 Re-Labeled Subsystems

A re-labeled Subsystem is defined as a Subsystem that is identical to a currently recognized Subsystem, but has a different vendor name and may (or may not) have a different model number.

The re-labeling vendor may recognize a re-labeled Subsystem by entering the Subsystem into CTIA’s online certification database as an Initial recognition request:

- The re-labeled vendor name and model number shall be entered
- The CATL used for the originally recognized Subsystem shall be chosen
- The CATL shall evaluate any requirements that may be affected by the re-labeling (e.g., traceability) and upload the CATL evaluation report of the originally recognized Subsystem along with two additional documents:
- A Product Equality Letter from the re-labeling vendor. This letter shall state that the re-labeled Subsystem is the same as the originally recognized Subsystem (referenced by vendor name and model number as it appears in CTIA’s online certification database) and that no changes have been made other than the vendor name and possibly model number. The letter shall be signed and dated.

- An Authorization of Use Letter from the vendor of the originally recognized Subsystem. This letter shall state that the vendor of the originally recognized Subsystem allows the CATL to use the evaluation report from this Subsystem for recognition of the relabeled Subsystem. The letter shall be signed and dated.

3.9 Embedded Packs

There are two options for the recognition of embedded (non-user replaceable) packs:

a) Option 1
The embedded pack may follow the standard pack recognition process. In this case, the pack must meet all of the requirements of the pack section of the CRSL including Sections 5.23 and 5.48 for IEEE 1725 and Sections 5.48, 5.66 and 5.75 for IEEE 1625. During the System certification request, the host vendor will find the pack listed in the recognized pack drop-down list. In this option, compliance is not dependent on the Host. To use this process, the pack vendor shall select one of the following request types, as shown in Section 3.2 of this document:

- Pack Recognition Request – 1725
- Pack Recognition Request – 1625

b) Option 2
Alternatively, the embedded pack may follow a special embedded pack recognition process. The pack will be evaluated by using the requirements of the pack section of the CRSL and omitting Sections 5.23 and 5.48 for IEEE 1725 and Sections 5.48, 5.66 and 5.75 for IEEE 1625. These sections will be evaluated during the System certification request. Because these sections will not be performed during the pack evaluation, the pack will be listed as a recognized embedded pack in the CTIA certification database. During the System certification request, the host vendor will find the pack listed in the recognized pack drop-down list (when selected, the host vendor will be notified that the pack is an embedded pack and will require additional battery pack validation testing during the system evaluation). In this option, compliance is dependent on the Host.

To use this process, the pack vendor shall select one of the following request types, as shown in Section 3.2 of this document:

- Embedded Pack Recognition Request – 1725
- Embedded Pack Recognition Request – 1625

This special embedded pack recognition process may also apply in cases where the pack protection circuitry is part of the host. The host vendor shall make two submissions: an embedded pack recognition request and a System certification request.

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4 The CATL performing the pack evaluation may, at the request of the pack vendor, perform these optional tests for embedded pack recognition. Should the CATL performing the System evaluation request confirmation that these optional tests were conducted, the CATL that performed the pack evaluation shall confirm this by appropriate means.
request. The embedded pack recognition request and the System certification request may have the same model number.

3.10 Embedded Adapters

Embedded (non-user replaceable) adapters cannot be recognized and shall be evaluated as part of the System certification request (see Section 5.2 of this document).
4 Adapter Certification Process

4.1 Introduction

To obtain certification of an Adapter, the Adapter vendor submits a certification request to CTIA. The vendor selects a CATL to evaluate compliance to IEEE Std 1725 using criteria set forth in the CRD in accordance with the applicable version of the CRSL. The CATL evaluates compliance and provides an evaluation report to CTIA. The vendor submits a Declaration of Compliance and pays a certification fee to CTIA. CTIA certifies the Adapter when all steps are complete.

See APPENDIX K: Process Flowchart for an overview of the process.

4.2 Adapter Certification Request

Vendors shall submit Adapter certification requests via CTIA’s online certification database at https://cpo.ctia.org/. User login accounts may be requested by selecting “I need a user name and password” on the login page.

The vendor shall select “Initial” Request Type and enter information about the Adapter, including identification of the site(s) where the adapter is manufactured.

Multiple models may be submitted in a single request provided there are no differences that impact the requirements of this Program.

The vendor shall select a CATL and request a start date.

The vendor shall upload a signed and scanned Declaration of Compliance for IEEE 1725 (see APPENDIX C: Subsystem Declaration of Compliance – IEEE 1725). Submission of a hardcopy of the declaration by vendor shall not be required.

CTIA will invoice the vendor for the CTIA fees as described in APPENDIX A: CTIA Recognition and Certification Fees. Vendor shall inform CTIA if a P.O. number is required on the invoice.

The CATL will receive an e-mail notification of the certification request. The CATL will log into the database (https://cpo.ctia.org/) to review and accept/reject the request. The database will send an e-mail notification to the submitter once the CATL has accepted/rejected the request. If the request is rejected, the submitter may re-assign the request to another CATL.

Once the request has been accepted by the CATL, the vendor may no longer make changes to the request. The vendor shall contact the CATL or CTIA if any changes need to be made to the data entered.

4.3 CATL Evaluation

The vendor shall provide, as appropriate, declarations, design data, manufacturing data, test data, test reports, audit reports, test samples and device specifications as required for the CATL to complete its evaluation.

The CATL shall use the Certification Requirements Status List (CRSL) to determine the applicable certification steps.
After accepting the request, the CATL shall work with the vendor to conduct an evaluation, which might include testing samples, reviewing supplied evidence or conducting an on-site audit\(^5\). The evaluation may start only after the vendor has entered the request into the database and the CATL has accepted the request.

The Adapter will be tested against a Host Simulator.

Non-compliances will be resolved between the CATL and the vendor.

Should the CATL identify a potential problem with a requirement, it shall issue a Change Request (CR), with adequate justification, proposing a change in category status. The CR shall be sent to all active CATLs for review. The CATLs shall have 5 business days to comment on the CR. Comments arguing against the change shall include adequate justification. Upon mutual resolution of any comments, the requirement may be changed.

Test results from similar products may be used at the CATL’s judgment. The CATL shall provide justification in the evaluation report for using these results.

Upon completion of the evaluation, the CATL shall log into CTIA’s online certification database and:

- Enter the CRSL version used for the evaluation (the version to be used is one that is active on the date the evaluation report is uploaded to the database)
- Verify the Adapter information (correcting and updating as necessary).
- Enter the start and end dates of the review
- Upload the CATL evaluation report and the completed CATL Worksheets (the report and worksheets shall not contain any confidential/proprietary technical information). The vendor may then view and download these documents via the database.

The CATL evaluation report shall have a cover page with the company logo and shall include the following information:

1) Adapter Vendor name, model number and revision number for each Adapter evaluated
2) Review date(s)
3) IEEE 1725 and CRSL versions
4) Summary of review
5) Person(s) who conducted evaluation
6) Contact point
7) Lab accreditation identifier (issued by accreditation body), CATL authorization code
8) Signature of authorized representative

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\(^5\) An on-site audit may be required to evaluate a subsystem.
CATL evaluation reports, CATL worksheets, and declarations will be accessible by the vendor via CTIA's online certification database and retained by CTIA for a period of 5 years from the date of certification, after which all documentation will be destroyed.

Unless authorized by the Adapter Vendor, the Compliance Folder will be maintained in confidence by CTIA.

4.4 Certification

Upon completion of the following items, the Adapter will be certified:

- CATL evaluation report and completed CATL Worksheets uploaded by the CATL
- Signed Declaration of Compliance uploaded by the vendor
- Payment of the CTIA certification fees
- Fully executed Adapter Certification Agreement (see APPENDIX J: Adapter Certification Agreement)

4.5 Changes to Certified Adapters

Once an Adapter is certified, the vendor shall evaluate any changes within the Adapter that fall within the scope of IEEE 1725 to determine whether the changes impact the certification. Changes that do impact the certification shall be submitted as an ECO (by logging into the CTIA certification database, selecting Submit New Request and choosing “ECO” Request Type), identifying the new Revision # of the Adapter. Supporting evidence shall be provided to the CATL. For any changes, the current revision the CRSL and CRD shall be used, in addition a gap analysis must be performed by the CATL between the CRSL and CRD used for the most recently approved request and the current CRSL and CRD. Additional documentation and/or testing may be required if any requirements have changed.

Once an Adapter is certified, any required changes to the Adapter model number in the certification database shall be submitted as a new request.

4.6 De-Listing

Adapter vendors may at any time request de-listing of a certified Adapter. One reason for doing this would be to remove from the database drop-down selections products that are no longer on the market. Another reason would be to notify CTIA of Adapters that are no longer in compliance. The vendor shall send an e-mail to certification@ctia.org and include the manufacturer name, model #, revision # and reason for requesting de-listing.

If the reason is that the product is no longer in compliance, CTIA will withdraw the certification as well as remove the Adapter from the Certified Adapter list. CTIA will make its best effort to contact the vendors and operators listed in its certification database who may be impacted.

4.7 Re-Labeled Certified Adapters

A re-labeled Certified Adapter is defined as a Certified Adapter that is identical to a currently Certified Adapter, but has a different vendor name and may (or may not) have a different model number.
The re-labeling vendor may certify a re-labeled Adapter by entering the Adapter into CTIA’s online certification database as an Initial certification request:

- The re-labeled vendor name and model number shall be entered.
- The CATL used for the originally certified Adapter shall be chosen.
- The CATL shall evaluate any requirements that may be affected by the re-labeling (e.g., traceability) and upload the CATL evaluation report of the originally certified Adapter along with two additional documents:
  - A Product Equality Letter from the re-labeling vendor. This letter shall state that the re-labeled Adapter is the same as the originally certified Adapter (referenced by vendor name and model number as it appears in CTIA’s online certification database) and that no changes have been made other than the vendor name and possibly model number. The letter shall be signed and dated.
  - An Authorization of Use Letter from the vendor of the originally certified Adapter. This letter shall state that the vendor of the originally certified Adapter allows the CATL to use the evaluation report from this Adapter for certification of the relabeled Adapter. The letter shall be signed and dated.
5 System Certification Process

5.1 Introduction

To certify a System, the System Vendor submits a certification request to CTIA. The System must include one or more recognized packs or recognized embedded (non-user replaceable) packs. The System may also include one or more recognized adapters or an embedded (non-user replaceable) adapter. Should the System not contain an adapter, the System will be tested with an Adapter Simulator or Certified Adapter, depending on the test.

The vendor selects a CATL to evaluate compliance to IEEE 1725 or IEEE 1625 using criteria set forth in the CRD in accordance with the applicable version of the CRSL. The CATL evaluates compliance and provides an evaluation report to CTIA. The vendor submits a Declaration of Compliance and pays a certification fee to CTIA. CTIA certifies the System when all steps are complete.

See APPENDIX K: Process Flowchart for an overview of the process.

Systems with single-cell batteries shall be certified to IEEE 1725.

Systems containing only cells connected in parallel shall be certified to IEEE 1725.

Systems with cells connected in series, including series and parallel combinations, shall be certified to IEEE 1625.

5.2 Certification Request

System Vendors shall submit certification requests via CTIA's online certification database at https://cpo.ctia.org/. User login accounts may be requested by selecting “I need a user name and password” on the login page.

Only System Vendors may submit System certification requests.

Systems shall be certified based on the host. Multiple models may be submitted in a single request provided there are no differences that impact the requirements of this Program. Any subsequent additions or changes to the System shall be entered as ECOs (see Section 5.5 of this document).

A new System may be certified using the supporting evidence of a previously certified System provided there are no differences that impact the requirements of this Program. The System Vendor shall provide a declaration to the CATL stating that the two Systems are identical in terms of the Program requirements. The declaration shall reference the host model number of the new System and the previously certified System. The CATL shall submit updated CATL Worksheets and CATL Evaluation Report referencing the model number of the new host. The evaluation report shall indicate that the evaluation from the previous System was used and shall include the justification provided by the System Vendor. The CRD version of the previously certified System will therefore apply to this new System, even if that CRD version is now expired. The Declaration of Compliance submitted by the System Vendor must reference the new model number.

The System Vendor shall select Battery System Certification Request and then select “Initial” Request Type. The System Vendor shall then enter information about the System, including selecting the recognized Subsystems that are part of the System. Recognized Subsystems will
appear on drop-down lists for selection. If a subsystem is not yet recognized, the System Vendor shall check the “Pending Recognition” box (the System can be certified only after those subsystems become recognized, however).

- If the Host includes an embedded adapter, the vendor shall check “Unrecognized Embedded Adapter” and enter the manufacturer name and model number of the embedded adapter. As the adapter is an integral part of the Host and may not have a model number of its own, any identifying information may be entered.

- If the System does not include an Adapter, the vendor shall check “No Adapter”.

The System Vendor shall select a CATL and request a start date.

The System Vendor shall also select the operators allowed to view the contents of the System Compliance Folder once the System is certified. Viewing the System Compliance Folder also allows for viewing of the Subsystem compliance folders.

The System Vendor shall upload a signed and scanned Declaration of Compliance for IEEE 1725 (see APPENDIX F: System Declaration of Compliance – IEEE 1725) or Declaration of Compliance for IEEE 1625 (see APPENDIX G: System Declaration of Compliance – IEEE 1625). Submission of a hardcopy of the declaration by vendor shall not be required.

CTIA will invoice the System Vendor for the CTIA fees as described in APPENDIX A: CTIA Recognition and Certification Fees.

The CATL will receive an e-mail notification of the certification request. The CATL will log into the database (https://cpo.ctia.org/) to review and accept/reject the request. The database will send an e-mail notification to the submitter once the CATL has accepted/rejected the request. If the request is rejected, the submitter may re-assign the request to another CATL.

Once the request has been accepted by the CATL, the vendor may no longer make changes to the data entered.

### 5.3 CATL Evaluation

The vendor shall provide, as appropriate, declarations, design data, manufacturing data, test data, test reports, audit reports, test samples and device specifications as required for the CATL to complete its evaluation.

Test samples covering all iterations of the System should be submitted. If all iterations are not submitted, justification shall be documented in the CATL evaluation report.

The CATL shall use the Certification Requirements Status List (CRSL) to determine the applicable recognition steps.

After accepting the request, the CATL shall work with the vendor to conduct an evaluation, which might include testing samples, reviewing supplied evidence or conducting an on-site audit\(^6\). The evaluation may start only after the vendor has entered the request into the database and the CATL has accepted the request.

Non-compliances will be resolved between the CATL and the vendor.

\(^6\) An on-site audit may be required to evaluate a subsystem. The audit is product-specific and augments the manufacturing site authorization audit.
Should the CATL identify a potential problem with a requirement, it shall issue a Change Request (CR), with adequate justification, proposing a change in category status. The CR shall be sent to all active CATLs for review. The CATLs shall have 5 business days to comment on the CR. Comments arguing against the change shall include adequate justification. Upon mutual resolution of any comments, the requirement may be changed.

Test results from similar products may be used at the CATL’s judgment. The CATL shall provide justification in the evaluation report for using these results.

Upon completion of the evaluation, the CATL shall log into CTIA’s online certification database and:

- Enter the CRSL version used for the evaluation (the version to be used is one that is active on the date the evaluation report is uploaded to the database)
- Verify the System information (correcting and updating as necessary)
- Enter the start and end dates of the review
- Upload the CATL evaluation report and the completed CATL Worksheets (the report and worksheets shall not contain any confidential/proprietary technical information). The vendor may then view and download these documents via the database.

The CATL evaluation report shall have a cover page with the company logo and shall include the following information:

1) System Vendor name
2) Model number(s) of host
3) Hardware version of host
4) Software version of host
5) Vendor names and model numbers of System components (batteries, cells, adapters). Should a Subsystem contain multiple model numbers, the specific model numbers used within the System shall be clearly identified.
6) Review date(s)
7) IEEE 1725 or IEEE 1625 version, and CRSL version
8) Summary of review
9) Person(s) who conducted review
10) Contact point
11) Lab accreditation identifier (issued by accreditation body), CATL authorization code
CATL evaluation reports, CATL worksheets, and declarations will be accessible by the vendor via CTIA’s online certification database and retained by CTIA for a period of 5 years from the date of recognition, after which all documentation will be destroyed.

Unless authorized by the Subsystem Vendor, the Compliance Folder will be maintained in confidence by CTIA.

5.4 Certification

Upon completion of the following items, the System will be certified:

- CATL evaluation report and completed CATL Worksheets uploaded by the CATL
- Signed Declaration of Compliance uploaded by the System Vendor
- Fully executed System Certification Agreement (see APPENDIX H: Battery System Certification Agreement)

5.5 Changes to Certified Systems

Once a System is certified, the System Vendor shall evaluate any changes within the Subsystems that fall within the scope of IEEE 1725 or IEEE 1625 to determine whether the changes impact the System certification. Changes that do impact the certification shall be submitted as an ECO (by logging into the CTIA certification database, selecting Battery System Certification Request and choosing “ECO” Request Type). Supporting evidence shall be provided to the CATL. For any changes, the current revision the CRSL and CRD shall be used, in addition a gap analysis must be performed by the CATL between the CRSL and CRD used for the most recently approved request and the current CRSL and CRD. Additional documentation and/or testing may be required if any requirements have changed.

Changes could include, for example:

- Changes to System components (e.g., new revisions)
- Addition or removal of System components
- New HW/SW revisions of the host

The System Vendor shall upload to the database a signed and scanned updated Declaration of Compliance.

Once CTIA approves the CATL evaluation report, CTIA will upload a System Certification Agreement Amendment (see APPENDIX I: Battery System Certification Agreement Amendment) to the database. The vendor will be notified via e-mail. The vendor shall print, sign, scan and re-upload the agreement. CTIA will then approve the ECO request.

Once a System is certified, any required changes to the host model number entered into the certification database shall be submitted as a new request.
Certified Systems will be available for view, via CTIA’s certification database, to
- The System Vendor
- The CATL that certified the System
- Operators authorized by the System Vendor to view the certified System

System information that can be viewed will include:
- Host vendor name and model number
- HW/SW version of the host
- Battery vendor name(s) and model number(s)
- Cell vendor name(s) and model number(s)
- Adapter vendor name(s) and model number(s)
- Date certified
- Declaration of Compliance
- CATL evaluation report

Recognized Subsystems and Certified Adapters will be available for view, via CTIA’s certification database, to
- All System Vendors
- All Subsystem Vendors
- All Operators
- All CATLs

Subsystem information that can be viewed will include:
- Vendor name and model number
- Capacity (for Cells and Packs)
- Manufacturing Sites
- Revision #
- CRSL version used for the evaluation
- Date recognized

Note: The Subsystem Vendor can view all information entered in the database for their Subsystems, including the CATL evaluation reports and Declarations of Compliance.

Authorized cell manufacturing site detail will be available for view, via CTIA’s certification database, to
- Cell Vendors (can view only their own sites)
- All CATLs (can view all sites)

Site information that can be viewed will include:
- Vendor name, site name and address
- Comments
- CRSL version used for the evaluation
- Date authorized
7 Site Authorization, Recognition or Certification Challenge

7.1 Introduction

This section provides the process for challenging the continued validity of a site authorization, Subsystem recognition, Adapter certification or System certification.

7.2 Challenge Process

Any interested person may challenge the continued validity of a site authorization, Subsystem recognition, Adapter certification or System certification by submitting a written request to CTIA. The written request must state with particularity the basis for the challenge.

CTIA will review all such requests with the Operator members of the CATL Review Committee and will then determine the next steps, if any, in pursuing a challenge.

If a challenge is determined to be warranted, CTIA will notify the challenged CATL and vendors that their continuing compliance with the program requirements has been challenged, and will provide the CATL and vendor(s) with the basis for the challenge. CTIA will ask the CATL and/or vendor(s) responsible for the site authorization, Recognition, or Certification to respond to the issues raised by the challenge.

CTIA, in consultation with the Operator members of the CATL Review Committee, also may ask the challenged CATL to re-evaluate the site, Subsystem or System. If deemed necessary, CTIA may select a different CATL to re-evaluate the site, Subsystem or System.

7.3 Successful Challenge

If a challenge to a site authorization is affirmed, the site authorization will be revoked until the site can demonstrate its compliance with the program requirements and be re-authorized by CTIA. Cells manufactured at a site prior to its re-authorization, may have their recognition revoked. Subsequently, all Battery Packs and Systems utilizing the revoked Cells may also be revoked.

If a challenge to a Subsystem recognition is affirmed, the Subsystem recognition will be revoked. Subsequently, all impacted Subsystems/Systems utilizing the revoked Subsystem may also be revoked.

If a challenge to a System certification or Adapter certification is affirmed, the certification will be revoked.

Subsystem recognitions, Adapter certifications and System certifications may be reinstated if a re-evaluation shows no issues with the Subsystem/System and demonstrates its compliance with the program requirements.

If it is determined that the challenged CATL did not properly follow the program requirements, the CATL may be placed on probation or have its CTIA authorization revoked.
APPENDIX A: CTIA Recognition and Certification Fees

The fee for Subsystem recognition is:
- $2,500 for Cell, Pack or Hybrid – Initial
- $750 for Adapter - Initial
- $0 for Cell, Pack or Adapter - ECO

The fee for Adapter certification is $2,500.

There is no fee for System certification.

These fees are separate from the fees charged by the CATL to evaluate compliance of Subsystems or Systems.
APPENDIX B: CATL Authorization Requirements

Please see the Policies and Procedures for CTIA Authorized Testing Laboratories document.
Declaration of Compliance

WHEREAS, ____________________________________________.

[full name of Declarer]

a ____________________________________________ corporation, with principal offices located at

[full address of Declarer]

(herinafter the “Declarer”), has developed the following subsystem that meets the terms and conditions of IEEE 1725™, as further defined by:

Cell or Battery or Adapter Model Name(s) & Number(s):

(herinafter the “Subsystem”);

WHEREAS, the Declarer issues this Declaration of Compliance in order to certify to CTIA that the Subsystem complies with all applicable provisions of IEEE 1725;

WHEREAS, for purposes of the CTIA Battery Certification Program, the Compliance Folder shall include this declaration, the CTIA Authorized Test Lab evaluation report and the CTIA Authorized Test Lab worksheets; and

WHEREAS, the Compliance Folder constitutes evidence demonstrating compliance of the Subsystem to IEEE 1725 and is maintained by CTIA.

NOW THEREFORE, the Declarer undertakes and certifies that the Subsystem, as manufactured and marketed, complies with all applicable provisions of IEEE 1725 and the current version of the CTIA Battery Program Management Document (BPMD);

FURTHERMORE, Declarer further undertakes and certifies that this Declaration of Compliance constitutes an essential element of CTIA’s Battery Certification Program, and acknowledges responsibility for compliance with all applicable provisions; and

FURTHERMORE, Declarer authorizes CTIA to audit the Compliance Folder.

I HAVE READ THE ABOVE DECLARATION OF COMPLIANCE, AND HEREBY AGREE TO BE BOUND BY ITS TERMS AND CONDITIONS. I AM AN OFFICIAL REPRESENTATIVE OF DECLARER, AND DULY AUTHORIZED TO CERTIFY AND ACT ON ITS BEHALF.
IN WITNESS WHEREOF, the undersigned has executed this Declaration of Compliance in his/her representative capacity on behalf of the Declarer, this _____ day of ______________, 201_.

ATTESTED BY:

By: _______________________________
    Signature of Authorized Representative

Name:

Title:
Declaration of Compliance

WHEREAS, __________________________________________________________________________________________,

[full name of Declarer]

a ________________________________________________________________________________________________corporation, with principal offices located at

[full address of Declarer]

(herinafter the “Declarer” ), has developed the following subsystem that meets the terms and conditions of IEEE 1625™, as further defined by:

   Cell or Battery or Adapter Model Name(s) & Number(s):

(herinafter the “Subsystem”);

WHEREAS, the Declarer issues this Declaration of Compliance in order to certify to CTIA that the Subsystem complies with all applicable provisions of IEEE 1625;

WHEREAS, for purposes of the CTIA Battery Certification Program, the Compliance Folder shall include this declaration, the CTIA Authorized Test Lab evaluation report and the CTIA Authorized Test Lab worksheets; and

WHEREAS, the Compliance Folder constitutes evidence demonstrating compliance of the Subsystem to IEEE 1625 and is maintained by CTIA.

NOW THEREFORE, the Declarer undertakes and certifies that the Subsystem, as manufactured and marketed, complies with all applicable provisions of IEEE 1625 and the current version of the CTIA Battery Program Management Document (BPMD);

FURTHERMORE, Declarer further undertakes and certifies that this Declaration of Compliance constitutes an essential element of CTIA’s Battery Certification Program, and acknowledges responsibility for compliance with all applicable provisions; and

FURTHERMORE, Declarer authorizes CTIA to audit the Compliance Folder.

I HAVE READ THE ABOVE DECLARATION OF COMPLIANCE, AND HEREBY AGREE TO BE BOUND BY ITS TERMS AND CONDITIONS. I AM AN OFFICIAL REPRESENTATIVE OF DECLARER, AND DULY AUTHORIZED TO CERTIFY AND ACT ON ITS BEHALF.
IN WITNESS WHEREOF, the undersigned has executed this Declaration of Compliance in his/her representative capacity on behalf of the Declarer, this _____ day of ______________, 201_.

ATTESTED BY:

By: ________________________________
   Signature of Authorized Representative

Name:

Title:
APPENDIX E: Subsystem Recognition Agreement

BATTERY SUBSYSTEM RECOGNITION AGREEMENT

This AGREEMENT is made in Washington, D.C.,

this _____ day of _______________, _________
(month) (year)

by and between

CTIA – The Wireless Association®
(“CTIA”)

and

________________________________________
(“SUBMITTER”)

RECITALS

Submitter has entered into a voluntary relationship with CTIA for the testing of certain battery subsystems manufactured by or for the Submitter, and Submitter has demonstrated to CTIA’s satisfaction that the:

Cell or Battery or Adapter Model Name(s) & Number(s):_________________________________ (“Cell or Battery or Adapter”)

meets CTIA’s requirements for Recognition under CTIA’s Battery Certification Program.

For these reasons, and of other good and lawful reasons and in consideration of the covenants set forth below, the parties agree as follows:

SECTION ONE
RECOGNITION

1.1 The Recitals are hereby incorporated in the same manner as if the same were repeated herein. Submitter is hereby granted a non-exclusive license to represent the specified Cell or Battery or Adapter (hereinafter “Subsystem”) as meeting CTIA’s requirements for Recognition based on the guidelines set forth in the CTIA Battery Certification Program Management Document, incorporated herein. CTIA warrants that it has full power and authority to grant the rights herein granted.

1.2 CTIA will permit the use of appropriate references to CTIA and its Battery Certification Program solely in connection with the specified Subsystem.

1.3 References to CTIA and the CTIA Battery Certification Program shall not be misleading as to the extent of Recognition.

1.4 Submitter shall be entitled to state that the specified Subsystem meets CTIA’s requirements for Recognition for as long as the specified Subsystem meets such requirements. Submitter shall discontinue use of CTIA’s mark and reference to CTIA’s Battery Certification Program upon receipt of written notice from CTIA to cease such use.
SECTION TWO
COMPLIANCE

2.1 The specified Subsystem shall comply with all of CTIA’s requirements for Recognition.

2.2 Submitter agrees that any tests or sampling of the specified Subsystem conducted by CTIA is only a check as to whether the specified Subsystem complies with CTIA’s requirements for Recognition and in no way relieves the Submitter of its responsibility for the Subsystem.

SECTION THREE
CORRECTIVE ACTION

3.1 Should CTIA conduct any assessments or examinations of the specified Subsystem that disclose units of the specified Subsystem do not comply with CTIA’s requirements for Recognition, CTIA retains the right to revoke Recognition of the specified Subsystem. CTIA agrees to provide Submitter in a timely manner with the results of any assessments or examinations that disclose the specified Subsystem does not comply with the requirements of Recognition. Submitter shall comply with all applicable laws and regulations governing a recall of the specified Subsystem.

3.2 Submitter agrees that it will cooperate with and assist CTIA in ascertaining the facts needed to determine that the specified Subsystem complies with CTIA’s Recognition requirements.

3.3 Submitter agrees that with prior written notice to Submitter, CTIA may notify vendors, authorities, potential users and others of any improper or unauthorized reference to CTIA, when in CTIA’s opinion such notification is necessary in the interest of the public or for CTIA’s own protection.

SECTION FOUR
TERMINATION

4.1 This Agreement shall continue so long as the specified Subsystem meets the requirements as set forth in the CTIA Battery Certification Program Management Document, unless termination rights provided for in this Agreement are exercised.

4.2 If Submitter fails to comply with any of the terms and conditions of this Agreement, CTIA may immediately terminate or suspend this Agreement upon written notice to Submitter.

4.3 Upon termination of this Agreement, the license granted under Section 1.1. shall be canceled.

4.4 Termination of this Agreement by whatever means shall not affect any liability of the parties existing as of the date of such termination, and shall not relieve Submitter of its obligation to indemnify CTIA hereunder.
SECTION FIVE
INDEMNIFICATION

5.1 Submitter indemnifies and holds harmless CTIA, its officers, directors, employees, members and agents, against any and all liability, loss, cost damage, claims, suits or expenses (including reasonable attorneys’ fees and costs) of any kind whatsoever, arising in any way from any negligent or willful acts or omission related to or in breach of this Agreement by Submitter or its agents or employees, or from Submitter’s use, marketing, or sale of the specified Subsystem, including but not limited to third party claims for injury or damage allegedly caused by the performance or failure to perform of the specified Subsystem or false or misleading advertising or marketing in connection with the specified Subsystem during the period of this Agreement or thereafter. Conversely, CTIA indemnifies and holds harmless Submitter, its officers, directors, employees, members, and agents against any and all liability, loss, cost, damage, claims, suits, or expenses (including reasonable attorneys’ fees and costs) of any kind whatsoever, arising in any way from any negligent or willful acts or omission related to or in breach of this Agreement by CTIA, its agents or employees.

5.2 Submitter shall defend CTIA against any claim to which its indemnity relates, provided that:

(i) CTIA provides Submitter with notice of the claim promptly after CTIA becomes aware of such claim, and the notice shall state the facts giving rise to such claim;

(ii) Submitter controls the defense or settlement of such claim, and Submitter shall not settle or otherwise dispose of such claim without CTIA’s prior written consent;

(iii) CTIA cooperates with Submitter in every reasonable way to facilitate the defense or settlement of such claim; and

(iv) CTIA does not settle or otherwise dispose of such claim without Submitter’s prior written consent, and such consent shall not be unreasonably withheld or delayed.

5.3 CTIA shall defend Submitter against any claim to which its indemnity relates, provided that:

(i) Submitter provides CTIA with notice of the claim promptly after Submitter becomes aware of such claim, and the notice shall state the facts giving rise to such claim;

(ii) CTIA controls the defense or settlement of such claim, and CTIA shall not settle or otherwise dispose of such claim without Submitter’s prior written consent;

(iii) Submitter cooperates with CTIA in every reasonable way to facilitate the defense or settlement of such claim; and

(iv) Submitter does not settle or otherwise dispose of such claim without CTIA’s prior written consent, and such consent shall not be unreasonably withheld or delayed.
SECTION SIX
LIMITATION OF LIABILITY

6.1 Submitter acknowledges and agrees that CTIA shall not be responsible for the loss, damage, or claim in connection with the use or marketing of the specified Subsystem, whether liability is asserted in contract or tort (including negligence or strict liability). In no event will either party be liable to the other party, or to any third party, for the loss of profits, loss of use, loss of production, loss of goodwill, or incidental, indirect, or consequential damages of any kind.

6.2 In no event will Submitter be liable to CTIA, or to any third party, for special, incidental or consequential damages (including, without limitation, loss or use, time or data, inconvenience, commercial loss, lost profits or savings) to the full extent such may be disclaimed by law, even if Submitter has been advised of the possibility of such damages.

SECTION SEVEN
NO APPROVAL

7.1 This Agreement does not constitute CTIA’s guarantee or warranty of the specified Subsystem and no representation of any kind by Submitter in connection with its use of the specified Subsystem or otherwise will directly or indirectly, explicitly or implicitly convey or suggest any such guarantee or warranty. CTIA may require that a statement disclaiming any CTIA guarantee or warranty must be included in the marketing and informational materials accompanying the specified Subsystem.

SECTION EIGHT
INSURANCE

8.1 Submitter will maintain during the period of this Agreement liability insurance of at least two million dollars in policy limits covering claims or suits arising from the specified Subsystem and will include CTIA as an additional insured on the policy as to matters covered by this Agreement, and Submitter shall furnish to CTIA evidence of that insurance.

[REST OF PAGE INTENTIONALLY LEFT BLANK]
IN WITNESS WHEREOF, CTIA and Submitter have executed this Agreement as of the dates set forth below.

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<thead>
<tr>
<th>CTIA – The Wireless Association®</th>
<th>SUBMITTER</th>
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<tr>
<td>By: __________________________</td>
<td>By: __________________________</td>
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<tr>
<td>Robert Mesirow</td>
<td>Name: __________________________</td>
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<td>Vice President, Operations</td>
<td>Title: __________________________</td>
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<td>Mark Sargent</td>
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<td>Vice President, Certification Programs</td>
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Declaration of Compliance

WHEREAS,__________________________________________________________.[full name of declarer]

a ______________________________________________________corporation, with principal offices located at

[full address of declarer]

(herinafter the “Declarer”), has developed the following system, that meets the terms and conditions of IEEE 1725™, as further defined by:

- Host Manufacturer Name, Model Name & Number:
- Cell Manufacturer Name, Model Name(s) & Number(s):
- Battery Manufacturer Name, Model Name & Number(s):
- Adapter Manufacturer Name, Model Name & Number(s):

(herinafter the “System”);

WHEREAS, the Declarer wishes to certify to CTIA and the Declarer’s carrier customer, based on the Declarer’s own testing and analysis of the relevant test results, that the System and associated documentation complies with all applicable provisions of IEEE 1725 (herinafter “IEEE 1725 Compliant”);

WHEREAS, the Declarer issues this Declaration of Compliance, in order to so certify that the System complies with all applicable provisions of IEEE 1725;

WHEREAS, for purposes of the CTIA Battery Certification Program, the System Compliance Folder constitutes evidence demonstrating compliance of the System to IEEE 1725: and

WHEREAS the System Compliance Folder is maintained by CTIA.

NOW THEREFORE, the Declarer undertakes and certifies that the System, as manufactured and marketed, complies with all applicable provisions of IEEE 1725 and the current version of the CTIA Battery Program Management Document (BPMG);

FURTHERMORE, Declarer further undertakes and certifies that this Declaration of Compliance constitutes an essential element of CTIA’s registration of the System on CTIA’s Registry of Battery Systems, and acknowledges responsibility for compliance with all applicable provisions.
Declarer authorizes CTIA to audit the System Compliance Folder.

I HAVE READ THE ABOVE DECLARATION AND HEREBY AGREE TO ITS TERMS AND CONDITIONS.

IN WITNESS WHEREOF, the undersigned has executed this Declaration in his/her representative capacity on behalf of the Submitter, this _____ day of ______________, 201_.

ATTESTED BY DECLARER

By: __________________________

Name: __________________________

Title: __________________________
APPENDIX G: System Declaration of Compliance – IEEE 1625

Declaration of Compliance

WHEREAS, [full name of declarer], a [full address of declarer] corporation, with principal offices located at [full address of declarer], has developed the following system, that meets the terms and conditions of IEEE 1625™, as further defined by:

Host Manufacturer Name, Model Name & Number:
Cell Manufacturer Name, Model Name(s) & Number(s):
Battery Manufacturer Name, Model Name & Number(s):
Adapter Manufacturer Name, Model Name & Number(s):

(herinafter the “System”);

WHEREAS, the Declarer wishes to certify to CTIA and the Declarer’s carrier customer, based on the Declarer’s own testing and analysis of the relevant test results, that the System and associated documentation complies with all applicable provisions of IEEE 1625 (herinafter “IEEE 1625 Compliant”);

WHEREAS, the Declarer issues this Declaration of Compliance, in order to so certify that the System complies with all applicable provisions of IEEE 1625;

WHEREAS, for purposes of the CTIA Battery Certification Program, the System Compliance Folder constitutes evidence demonstrating compliance of the System to IEEE 1625: and

WHEREAS the System Compliance Folder is maintained by CTIA.

NOW THEREFORE, the Declarer undertakes and certifies that the System, as manufactured and marketed, complies with all applicable provisions of IEEE 1625 and the current version of the CTIA Battery Program Management Document (BPMMD);

FURTHERMORE, Declarer further undertakes and certifies that this Declaration of Compliance constitutes an essential element of CTIA’s registration of the System on CTIA’s Registry of Battery Systems, and acknowledges responsibility for compliance with all applicable provisions.
Declarer authorizes CTIA to audit the System Compliance Folder.

I HAVE READ THE ABOVE DECLARATION AND HEREBY AGREE TO ITS TERMS AND CONDITIONS.

IN WITNESS WHEREOF, the undersigned has executed this Declaration in his/her representative capacity on behalf of the Submitter, this _____ day of ______________, 201__.

ATTESTED BY DECLARER

By: _________________________
Name: _______________________
Title: ________________________
APPENDIX H: Battery System Certification Agreement

BATTERY SYSTEM CERTIFICATION AGREEMENT

THIS AGREEMENT is made in Washington, D.C.,

this _____ day of ________________, ____________

(month) (year)

by and between

CTIA – The Wireless Association®
(“CTIA”)

and

____________________________________
(“SUBMITTER”)  

RECITALS

Submitter has entered into a voluntary relationship with CTIA for the testing of certain battery systems manufactured by or for the Submitter, and Submitter has demonstrated to CTIA’s satisfaction that the

Host Manufacturer Name, Model Name & Number:

Cell Manufacturer Name, Model Name(s) & Number(s):

Battery Manufacturer Name, Model Name & Number(s):

Adapter Manufacturer Name, Model Name & Number(s):

meets CTIA’s requirements for Certification under CTIA’s Battery Certification Program.

For these reasons, and of other good and lawful reasons and in consideration of the covenants set forth below, the parties agree as follows:

SECTION ONE
CERTIFICATION

1.1 The Recitals are hereby incorporated in the same manner as if the same were repeated herein. Submitter is hereby granted a non-exclusive license to represent the specified battery system (hereinafter “System”) as meeting CTIA’s requirements for Certification based on the guidelines set forth in the CTIA Battery Certification Program Management Document, incorporated herein. CTIA warrants that it has full power and authority to grant the rights herein granted.

1.2 CTIA will permit the use of appropriate references to CTIA and its Battery Certification Program solely in connection with the specified System.

1.3 References to CTIA and the CTIA Battery Certification Program shall not be misleading as to the extent of certification.
1.4 Submitter shall be entitled to state that the specified System meets CTIA’s requirements for battery certification for as long as the specified product meets such requirements. Submitter shall discontinue use of CTIA’s mark and reference to CTIA’s Battery Certification Program upon receipt of written notice from CTIA to cease such use.

SECTION TWO  
COMPLIANCE

2.1 The specified System shall comply with all of CTIA’s requirements for battery certification.

2.2 Submitter agrees that any tests or sampling of the specified System conducted by CTIA is only a check as to whether the specified System complies with CTIA’s requirements for battery certification and in no way relieves the Submitter of its responsibility for the System.

SECTION THREE  
CORRECTIVE ACTION

3.1 Should CTIA conduct any assessments or examinations of the specified System that disclose units of the specified System do not comply with CTIA’s requirements for battery certification, CTIA retains the right to revoke certification of the specified System. CTIA agrees to provide Submitter in a timely manner with the results of any assessments or examinations that disclose the unit(s) of the specified System which do not comply with the requirements of certification. Submitter shall comply with all applicable laws and regulations governing a recall of any unit of the specified System or the specified System itself.

3.2 Submitter agrees that it will cooperate with and assist CTIA in ascertaining the facts needed to determine that the specified System complies with CTIA’s battery certification requirements.

3.3 Submitter agrees that with prior written notice to Submitter, CTIA may notify vendors, authorities, potential users and others of any improper or unauthorized reference to CTIA, when in CTIA’s opinion such notification is necessary in the interest of the public or for CTIA’s own protection.

SECTION FOUR  
TERMINATION

4.1 This Agreement shall continue so long as the specified System meets the requirements as set forth in the CTIA Battery Certification Program Management Document, unless termination rights provided for in this Agreement are exercised.

4.2 If Submitter fails to comply with any of the terms and conditions of this Agreement, CTIA may immediately terminate or suspend this Agreement upon written notice to Submitter.

4.3 Upon termination of this Agreement, the license granted under Section 1.1. shall be canceled.

4.4 Termination of this Agreement by whatever means shall not affect any liability of the parties existing as of the date of such termination, and shall not relieve Submitter of its obligation to indemnify CTIA hereunder.
SECTION FIVE
INDEMNIFICATION

5.1 Submitter indemnifies and holds harmless CTIA, its officers, directors, employees, members and agents, against any and all liability, loss, cost damage, claims, suits or expenses (including reasonable attorneys’ fees and costs) of any kind whatsoever, arising in any way from any negligent or willful acts or omission related to or in breach of this Agreement by Submitter or its agents or employees, or from Submitter’s use, marketing, or sale of the specified System, including but not limited to third party claims for injury or damage allegedly caused by the performance or failure to perform of the specified System or false or misleading advertising or marketing in connection with the specified System during the period of this Agreement or thereafter. Conversely, CTIA indemnifies and holds harmless Submitter, its officers, directors, employees, members, and agents against any and all liability, loss, cost, damage, claims, suits, or expenses (including reasonable attorneys’ fees and costs) of any kind whatsoever, arising in any way from any negligent or willful acts or omission related to or in breach of this Agreement by CTIA, its agents or employees.

5.2 Submitter shall defend CTIA against any claim to which its indemnity relates, provided that:

(i) CTIA provides Submitter with notice of the claim promptly after CTIA becomes aware of such claim, and the notice shall state the facts giving rise to such claim;

(ii) Submitter controls the defense or settlement of such claim, and Submitter shall not settle or otherwise dispose of such claim without CTIA’s prior written consent;

(iii) CTIA cooperates with Submitter in every reasonable way to facilitate the defense or settlement of such claim; and

(iv) CTIA does not settle or otherwise dispose of such claim without Submitter’s prior written consent, and such consent shall not be unreasonably withheld or delayed.

5.3 CTIA shall defend Submitter against any claim to which its indemnity relates, provided that:

(i) Submitter provides CTIA with notice of the claim promptly after Submitter becomes aware of such claim, and the notice shall state the facts giving rise to such claim;

(ii) CTIA controls the defense or settlement of such claim, and CTIA shall not settle or otherwise dispose of such claim without Submitter’s prior written consent;

(iii) Submitter cooperates with CTIA in every reasonable way to facilitate the defense or settlement of such claim; and

(iv) Submitter does not settle or otherwise dispose of such claim without CTIA’s prior written consent, and such consent shall not be unreasonably withheld or delayed.
SECTION SIX
LIMITATION OF LIABILITY

6.1 Submitter acknowledges and agrees that CTIA shall not be responsible for the loss, damage, or claim in connection with the use or marketing of the specified System, whether liability is asserted in contract or tort (including negligence or strict liability). In no event will either party be liable to the other party, or to any third party, for the loss of profits, loss of use, loss of production, loss of goodwill, or incidental, indirect, or consequential damages of any kind.

6.2 In no event will Submitter be liable to CTIA, or to any third party, for special, incidental or consequential damages (including, without limitation, loss or use, time or data, inconvenience, commercial loss, lost profits or savings) to the full extent such may be disclaimed by law, even if Submitter has been advised of the possibility of such damages.

SECTION SEVEN
NO APPROVAL

7.1 This Agreement does not constitute CTIA’s guarantee or warranty of the specified System and no representation of any kind by Submitter in connection with its use of the specified System or otherwise will directly or indirectly, explicitly or implicitly convey or suggest any such guarantee or warranty. CTIA may require that a statement disclaiming any CTIA guarantee or warranty must be included in the marketing and informational materials accompanying the specified System.

SECTION EIGHT
INSURANCE

8.1 Submitter will maintain during the period of this Agreement liability insurance of at least two million dollars in policy limits covering claims or suits arising from the specified System and will include CTIA as an additional insured on the policy as to matters covered by this Agreement, and Submitter shall furnish to CTIA evidence of that insurance.

[REST OF PAGE INTENTIONALLY LEFT BLANK]
IN WITNESS WHEREOF, CTIA and Submitter have executed this Agreement as of the dates set forth below.

<table>
<thead>
<tr>
<th>CTIA – The Wireless Association®</th>
<th>SUBMITTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>By: ____________________________</td>
<td>By: ____________________________</td>
</tr>
<tr>
<td>Robert Mesirow</td>
<td>Name:</td>
</tr>
<tr>
<td>Vice President, Operations</td>
<td>Title:</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>By: ____________________________</td>
<td></td>
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<tr>
<td>Mark Sargent</td>
<td></td>
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<tr>
<td>Vice President, Certification Programs</td>
<td></td>
</tr>
<tr>
<td>Date:</td>
<td>Date:</td>
</tr>
</tbody>
</table>
This <enter amendment #> Amendment to the Battery System Certification Agreement ("Agreement") dated ______________________, between CTIA – The Wireless Association® ("CTIA") and _____________________ ("Submitter") is entered into on this __ day of __________, ______ ("Effective Date") between CTIA and Submitter.

WHEREAS, CTIA and Submitter entered into the Agreement, wherein Submitter demonstrated to CTIA’s satisfaction that the

- Host Manufacturer Name, Model Name & Number:
- Cell Manufacturer Name, Model Name(s) & Number(s):
- Battery Manufacturer Name, Model Name(s) & Number(s):
- Adapter Manufacturer Name, Model Name(s) & Number(s):

meets CTIA’s requirements for Certification under CTIA’s Battery Certification Program;

WHEREAS, the Submitter has modified the certified Battery System by <adding or removing>

- Host Manufacturer Name, Model Name & Number:
- Cell Manufacturer Name, Model Name(s) & Number(s):
- Battery Manufacturer Name, Model Name(s) & Number(s):
- Adapter Manufacturer Name, Model Name(s) & Number(s):

WHEREAS, the Battery System with the modification(s) continues to meet CTIA’s requirements.

NOW, THEREFORE in consideration of the mutual covenants contained herein and other good and valuable consideration, receipt of which is hereby acknowledged, the parties agree as follows:

1. Terms used in this <enter amendment #> Amendment and not otherwise defined shall have the same meaning as set forth in the Agreement.

2. The first paragraph in the Recitals Section of the Agreement is hereby amended to include the modified Battery System as defined above.

3. This <enter amendment #> Amendment shall also be filed in the Compliance Folder as defined in the Battery Program Management Document.
4. Except as specifically modified by this <enter amendment #> Amendment, the terms and conditions of the Agreement shall remain in full force and effect.

IN WITNESS WHEREOF, the Parties have caused this Amendment to be duly executed as of the date first written above.

<table>
<thead>
<tr>
<th>CTIA – The Wireless Association®</th>
<th>SUBMITTER</th>
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<tbody>
<tr>
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<tr>
<td>By: ___________________________</td>
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<tr>
<td>Mark Sargent</td>
<td></td>
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<tr>
<td>Vice President, Certification Programs</td>
<td></td>
</tr>
<tr>
<td>Date:</td>
<td>Date:</td>
</tr>
</tbody>
</table>
APPENDIX J: Adapter Certification Agreement

ADAPTER CERTIFICATION AGREEMENT

THIS AGREEMENT is made in Washington, D.C.,

this _____ day of ______________, ___________

(month) (year)

by and between

CTIA – The Wireless Association®
(“CTIA”)

and

______________________

(“SUBMITTER”)

RECITALS

Submitter has entered into a voluntary relationship with CTIA for the testing of certain adapters manufactured by or for the Submitter, and Submitter has demonstrated to CTIA’s satisfaction that the

Adapter Manufacturer Name, Model Name & Number(s):

meets CTIA’s requirements for Certification under CTIA’s Battery Certification Program.

For these reasons, and of other good and lawful reasons and in consideration of the covenants set forth below, the parties agree as follows:

SECTION ONE
CERTIFICATION

1.1 The Recitals are hereby incorporated in the same manner as if the same were repeated herein. Submitter is hereby granted a non-exclusive license to represent the specified adapter (hereinafter “Adapter”) as meeting CTIA’s requirements for Certification based on the guidelines set forth in the CTIA Battery Certification Program Management Document, incorporated herein. CTIA warrants that it has full power and authority to grant the rights herein granted.

1.2 CTIA will permit the use of appropriate references to CTIA and its Battery Certification Program solely in connection with the specified Adapter.

1.3 References to CTIA and the CTIA Battery Certification Program shall not be misleading as to the extent of certification.

1.4 Submitter shall be entitled to state that the specified Adapter meets CTIA’s requirements for Certification for as long as the specified product meets such requirements. Submitter shall discontinue use of CTIA’s mark and reference to CTIA’s Battery Certification Program upon receipt of written notice from CTIA to cease such use.

SECTION TWO
COMPLIANCE
2.1 The specified Adapter shall comply with all of CTIA’s requirements for Certification.

2.2 Submitter agrees that any tests or sampling of the specified Adapter conducted by CTIA is only a check as to whether the specified Adapter complies with CTIA’s requirements for Certification and in no way relieves the Submitter of its responsibility for the Adapter.

SECTION THREE
CORRECTIVE ACTION

3.1 Should CTIA conduct any assessments or examinations of the specified Adapter that disclose units of the specified Adapter do not comply with CTIA’s requirements for Certification, CTIA retains the right to revoke certification of the specified Adapter. CTIA agrees to provide Submitter in a timely manner with the results of any assessments or examinations that disclose the unit(s) of the specified Adapter which do not comply with the requirements of certification. Submitter shall comply with all applicable laws and regulations governing a recall of any unit of the specified Adapter or the specified Adapter itself.

3.2 Submitter agrees that it will cooperate with and assist CTIA in ascertaining the facts needed to determine that the specified Adapter complies with CTIA’s Certification requirements.

3.3 Submitter agrees that with prior written notice to Submitter, CTIA may notify vendors, authorities, potential users and others of any improper or unauthorized reference to CTIA, when in CTIA’s opinion such notification is necessary in the interest of the public or for CTIA’s own protection.

SECTION FOUR
TERMINATION

4.1 This Agreement shall continue so long as the specified Adapter meets the requirements as set forth in the CTIA Battery Certification Program Management Document, unless termination rights provided for in this Agreement are exercised.

4.2 If Submitter fails to comply with any of the terms and conditions of this Agreement, CTIA may immediately terminate or suspend this Agreement upon written notice to Submitter.

4.3 Upon termination of this Agreement, the license granted under Section 1.1. shall be canceled.

4.4 Termination of this Agreement by whatever means shall not affect any liability of the parties existing as of the date of such termination, and shall not relieve Submitter of its obligation to indemnify CTIA hereunder.
SECTION FIVE
INDEMNIFICATION

5.1 Submitter indemnifies and holds harmless CTIA, its officers, directors, employees, members and agents, against any and all liability, loss, cost damage, claims, suits or expenses (including reasonable attorneys’ fees and costs) of any kind whatsoever, arising in any way from any negligent or willful acts or omission related to or in breach of this Agreement by Submitter or its agents or employees, or from Submitter’s use, marketing, or sale of the specified Adapter, including but not limited to third party claims for injury or damage allegedly caused by the performance or failure to perform of the specified Adapter or false or misleading advertising or marketing in connection with the specified Adapter during the period of this Agreement or thereafter. Conversely, CTIA indemnifies and holds harmless Submitter, its officers, directors, employees, members, and agents against any and all liability, loss, cost, damage, claims, suits, or expenses (including reasonable attorneys’ fees and costs) of any kind whatsoever, arising in any way from any negligent or willful acts or omission related to or in breach of this Agreement by CTIA, its agents or employees.

5.2 Submitter shall defend CTIA against any claim to which its indemnity relates, provided that:

(v) CTIA provides Submitter with notice of the claim promptly after CTIA becomes aware of such claim, and the notice shall state the facts giving rise to such claim;

(vi) Submitter controls the defense or settlement of such claim, and Submitter shall not settle or otherwise dispose of such claim without CTIA’s prior written consent;

(vii) CTIA cooperates with Submitter in every reasonable way to facilitate the defense or settlement of such claim; and

(viii) CTIA does not settle or otherwise dispose of such claim without Submitter’s prior written consent, and such consent shall not be unreasonably withheld or delayed.

5.3 CTIA shall defend Submitter against any claim to which its indemnity relates, provided that:

(v) Submitter provides CTIA with notice of the claim promptly after Submitter becomes aware of such claim, and the notice shall state the facts giving rise to such claim;

(vi) CTIA controls the defense or settlement of such claim, and CTIA shall not settle or otherwise dispose of such claim without Submitter’s prior written consent;

(vii) Submitter cooperates with CTIA in every reasonable way to facilitate the defense or settlement of such claim; and

(viii) Submitter does not settle or otherwise dispose of such claim without CTIA’s prior written consent, and such consent shall not be unreasonably withheld or delayed.
SECTION SIX
LIMITATION OF LIABILITY

6.1 Submitter acknowledges and agrees that CTIA shall not be responsible for the loss, damage, or claim in connection with the use or marketing of the specified Adapter, whether liability is asserted in contract or tort (including negligence or strict liability). In no event will either party be liable to the other party, or to any third party, for the loss of profits, loss of use, loss of production, loss of goodwill, or incidental, indirect, or consequential damages of any kind.

6.2 In no event will Submitter be liable to CTIA, or to any third party, for special, incidental or consequential damages (including, without limitation, loss or use, time or data, inconvenience, commercial loss, lost profits or savings) to the full extent such may be disclaimed by law, even if Submitter has been advised of the possibility of such damages.

SECTION SEVEN
NO APPROVAL

7.1 This Agreement does not constitute CTIA’s guarantee or warranty of the specified Adapter and no representation of any kind by Submitter in connection with its use of the specified Adapter or otherwise will directly or indirectly, explicitly or implicitly convey or suggest any such guarantee or warranty. CTIA may require that a statement disclaiming any CTIA guarantee or warranty must be included in the marketing and informational materials accompanying the specified Adapter.

SECTION EIGHT
INSURANCE

8.1 Submitter will maintain during the period of this Agreement liability insurance of at least two million dollars in policy limits covering claims or suits arising from the specified Adapter and will include CTIA as an additional insured on the policy as to matters covered by this Agreement, and Submitter shall furnish to CTIA evidence of that insurance.

[REST OF PAGE INTENTIONALLY LEFT BLANK]
IN WITNESS WHEREOF, CTIA and Submitter have executed this Agreement as of the dates set forth below.

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<tbody>
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<tr>
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<td>Title:_____________________</td>
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<tr>
<td>By:______________________________</td>
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<tr>
<td>Mark Sargent</td>
<td></td>
</tr>
<tr>
<td>Vice President, Certification Programs</td>
<td></td>
</tr>
</tbody>
</table>

Date:                           Date:
APPENDIX K: Process Flowchart

CTIA Subsystem Recognition and System / Adapter Certification Process

<table>
<thead>
<tr>
<th>VENDOR</th>
<th>CTIA</th>
<th>CATL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request CTIA Certification Database Account</td>
<td>Establish Account for Vendor</td>
<td>Accept Project E-Mail to Vendor</td>
</tr>
<tr>
<td>Submit Project Select CATL Upload Declaration of Compliance E-Mail to CATL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pay Fee</td>
<td>Generate Invoice for Recognition / Certification Fee E-Mail to Vendor</td>
<td>Review and Test</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pass/Fail</td>
</tr>
<tr>
<td>Submit Paperwork and Samples to CATL</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Pass</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fail</td>
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<tr>
<td></td>
<td></td>
<td>Countersign and Upload License Agreement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Upload Reports</td>
</tr>
<tr>
<td>Sign and Upload License Agreement</td>
<td>Upload License Agreement E-Mail to Vendor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cell / Pack / Adapter Recognized or System / Adapter Certified E-Mail to Vendor</td>
</tr>
</tbody>
</table>
## APPENDIX L: Change History

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Description of Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rev 1.0</td>
<td>October 2006</td>
<td>• Initial publication</td>
</tr>
<tr>
<td>Rev 1.1</td>
<td>December 2006</td>
<td>• Added BCRO Worksheets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• System Vendor supporting evidence no longer provided to CTIA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Updated CRSL definitions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Updated registration process</td>
</tr>
<tr>
<td>Rev 1.2</td>
<td>February 2007</td>
<td>• Clarified that the BCRO evaluation report and the completed BCRO Worksheets shall not contain any confidential/proprietary technical information about the System</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Updated Declaration of Compliance and Submitter’s Declaration</td>
</tr>
<tr>
<td>Rev 1.3</td>
<td>March 2007</td>
<td>• Updated Indemnification clause of Battery Registration Agreement</td>
</tr>
<tr>
<td>Rev 1.4</td>
<td>April 2007</td>
<td>• Clarified examples of supporting evidence</td>
</tr>
<tr>
<td>Rev 1.5</td>
<td>July 2007</td>
<td>• Corrected typographical errors in Battery Registration Agreement: first paragraph of Indemnification section and second paragraph of Limitation of Liability section</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Added note that definitions may differ from definitions in IEEE 1725</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Added process for submitting multiple host models in a single request</td>
</tr>
<tr>
<td>Rev 1.6</td>
<td>October 2007</td>
<td>• Added process for allowing use of supporting evidence and evaluation data of previously registered Systems</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Corrected typographical errors in Battery Registration Agreement: second paragraph of Limitation of Liability section and No Approval section</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Updated Corrective Action and Indemnification sections of Battery Registration Agreement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Updated signature area of Battery Registration Agreement</td>
</tr>
<tr>
<td>Rev 2.0</td>
<td>January 2008</td>
<td>• Updated to incorporate transition from Phase One to Phase Two</td>
</tr>
<tr>
<td>Rev 2.1</td>
<td>March 2008</td>
<td>• Corrected hyperlink references</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Updated Subsystem Vendor and CATL Roles &amp; Responsibilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Updated Subsystem Recognition and System Registration Processes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Clarified no recognition fee for ECO</td>
</tr>
<tr>
<td>Rev 2.2</td>
<td>July 2008</td>
<td>• Added battery pack recognition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Added certification database process for cell manufacturing site authorization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Updated cell recognition process to include identifying the manufacturing site(s)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Added that vendor can contact CATL/BCRO if changes are needed to data entered in a request</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Clarified that non-compliances will be resolved between the CATL/BCRO and the vendor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Clarified that documents uploaded to the database by CATL or BCRO are available to vendor</td>
</tr>
<tr>
<td>Revision</td>
<td>Date</td>
<td>Changes</td>
</tr>
<tr>
<td>----------</td>
<td>------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Rev 2.3  | October 2008 | - Updated Subsystem Recognition Agreement and System Registration Agreement execution processes  
  - Added adapter recognition and system certification  
  - Modified pack recognition request process  
  - Defined test samples required for cells and packs  
  - Updated Subsystem Declaration of Compliance and Subsystem Recognition Agreement to include battery and adapter |
| Rev 3.0  | January 2009 | - Removed System Registration (Phase One) procedures  
  - Updated definition of Adapter  
  - Updated Subsystem Recognition Process - CATL Evaluation section to address packs with multiple cell revisions and to address parallel recognition of packs and cells  
  - Updated System Certification Process - CATL Evaluation to clarify samples required |
| Rev 3.1  | March 2009  | - Updated Subsystem Recognition Process - CATL Evaluation section to address packs with multiple cell models  
  - Clarified cell manufacturing site re-audit requirement  
  - Added subsystem de-recognition process |
| Rev 3.2  | September 2009 | - Added instructions for vendor to inform CTIA if P.O. number is required on certification fee invoice  
  - Renamed De-Recognition section to De-Listing and revised procedures.  
  - Clarified that multiple models of a subsystem may be submitted in a single request  
  - Added process for re-labeled subsystems  
  - Updated System ECO process  
  - Added Battery System Certification Agreement Amendment  
  - Included provisions for embedded battery packs and adapters |
| Rev 3.3  | November 2009 | - Updated definitions  
  - Added process flowchart  
  - Changed “Other Recognition Request” to “Hybrid Recognition Request”  
  - Clarified de-listing process  
  - Clarified System Certification Requests with embedded packs or adapters  
  - Added Hybrid to Subsystem Recognition fee schedule |
| Rev 3.4  | February 2010 | - Updated process for re-labeled subsystems  
  - Added Embedded Packs and Embedded Adapters sections to Subsystem Recognition process  
  - Updated process for certification of systems with embedded packs and embedded adapters |
| Rev 3.5  | April 2010  | - Updated Scope  
  - Added meeting attendance requirements for CATLs  
  - Added to Cell Manufacturing Site Authorization section: Sites not re-audited after the 12-month period will be removed from the list of authorized cell manufacturing sites; cells manufactured at those sites may no longer be submitted for recognition.  
  - Clarified that changes to subsystem or host model numbers requires the submission of a new request |
| Rev 4.0  | August 2010 | - Added requirements for adapter certification and certification of systems without adapters  
  - Added the word “any” in the first sentence of Sections 5.2 and... |
5.3 of both the Subsystem Recognition Agreement and the System Certification Agreement
- Added items 1e and 1f to CATL Authorization Requirements/Assessment Process

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rev 5.0</td>
<td>January 2011</td>
<td>Updated to incorporate IEEE 1625</td>
</tr>
</tbody>
</table>
| Rev 5.1  | February 2011 | Updated Definitions section to include BPMD, CRD and CRSL. Also updated CATL definition.  
- Updated System Certification Process – Introduction section to explain applicability of IEEE 1625 and IEEE 1725  
- Updated CATL Authorization Requirements to allow CATLs to be authorized for the IEEE 1625 CRD and/or IEEE 1725 CRD |
| Rev 5.2  | October 2011 | Updated processes for embedded packs  
- Updated Changes to Recognized Subsystems section  
- Updated Changes to Certified Adapters section  
- Clarified CATL evaluation of a pack containing multiple revisions of a cell or the same cell revision from multiple manufacturing sites |
| Rev 5.3  | April 2012  | Updated IEEE 1725 reference to IEEE Std 1725™-2011  
- Updated CATL Roles and Responsibilities to reference the Policies and Procedures for CTIA Authorized Testing Laboratories document  
- Updated Changes to Recognized Subsystems section to indicate that a change in the capacity of either a cell or a pack constitutes a new model  
- Added Site Authorization, Recognition or Certification Challenge section  
- Replaced text in Appendix B (CATL Authorization Requirements) with a reference to the Policies and Procedures for CTIA Authorized Testing Laboratories document |
| Rev 5.4  | February 2013 | Updated embedded pack recognition process to include cases where the pack protection circuitry is part of the host |
| Rev 5.5  | April 2013  | Updated embedded pack recognition process to include CATL statement regarding CRSL sections tested during pack evaluation |
| Rev 5.6  | August 2013 | Further updates to CATL statement regarding CRSL sections tested during embedded pack evaluation. |
| Rev 5.7  | December 2013 | Updated definition of Certified Adapter. |
| Rev 5.8  | May 2014   | Updated System Certification Process – Introduction section to allow systems without an adapter to be tested against an Adapter Simulator or a Certified Adapter. |