

**Technical Proposal for Standardisation:
Signalisation of „Amount of Energy“
based on IEC 61851-1 Annex A**

Draft 0.3

Date: 05.03.2015

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General

Definitions:

- EA=EAmount: Amount of energy reflecting the EV's estimate how much energy is needed to fulfill the user configured charging goal for the current charging session. This might include energy for other purposes than solely charging the HV battery of an EV (as defined in ISO 15118).
- States X1/X2, Ax, Bx, Cx, as well as switch S2 are defined in IEC 61851-1 Annex A
- N=Number of phases; 1 or 3
- P=max charging power of the EV in kW

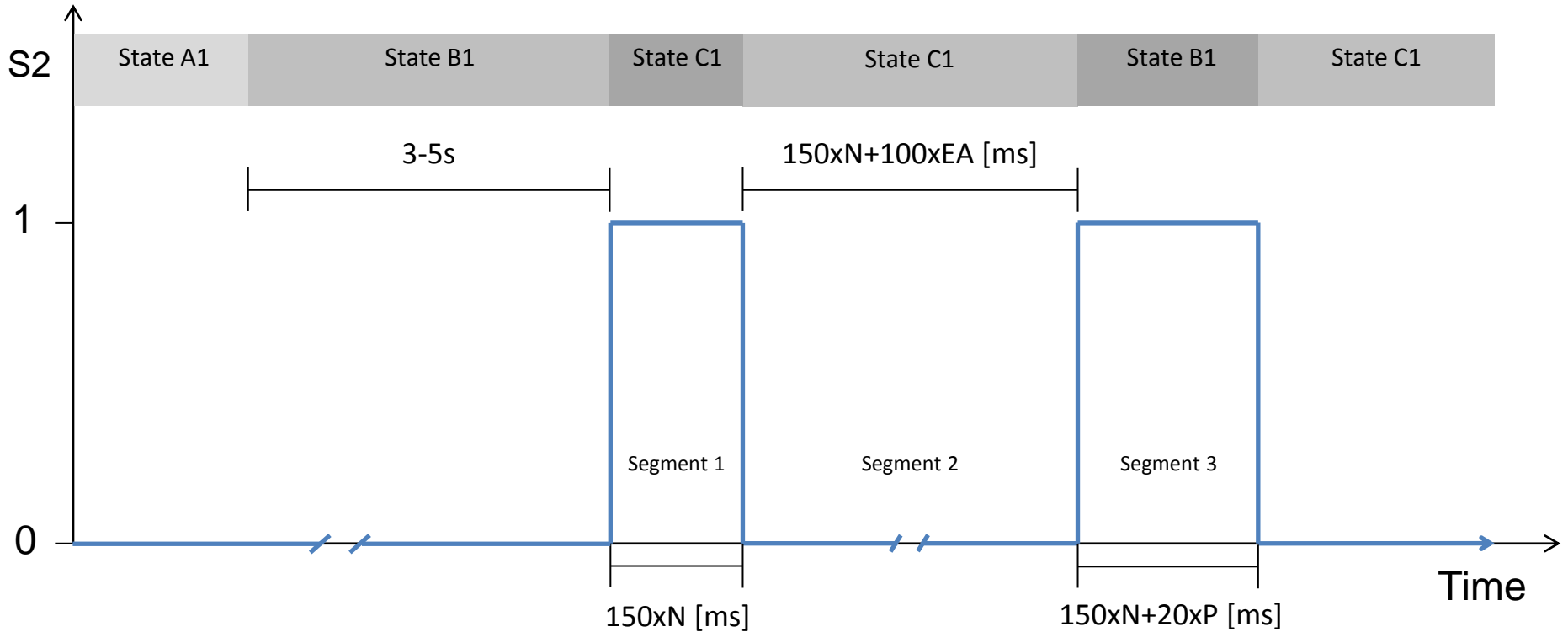
Scope:

A method is proposed based on the 61851-1 Annex A, which allows the EV to signal its Eamount, max. charging power and number of phases to the charging station.

The target is that the method can be implemented without hardware modifications to the EVSE or EV, and backward compatibility is made possible.

Signalisation Sequence in State X1

EVSE not ready to supply Energy



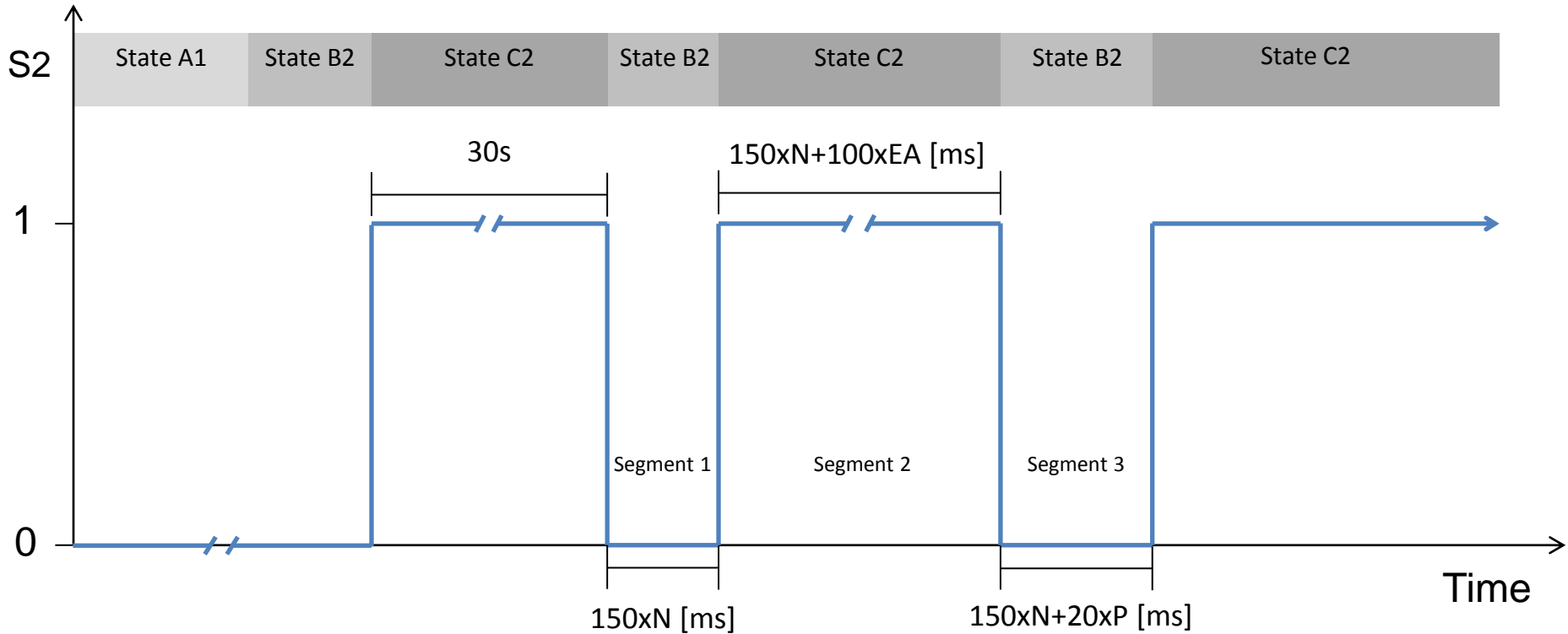
This sequence might be repeated by EV to update EAmount.

Example for Signalisation of Energy Need**EAmount = 8kWh**

	230V & 7,4kW N=1, P=7,4	400V & 22kW N=3, P=22
Segment 1	150xN =150ms	150xN =450ms
Segment 2	150xN+EAx100 =950ms	150xN+EAx100 =1250ms
Segment 3	150xN+20xP =298ms	150xN+20xP =890ms

Signalisation Sequence in State X2 (optional)

EVSE ready to supply Energy



This sequence might be repeated by EV during a charging session to update EAmount.

**Technical Proposal for Standardisation:
Signalisation of „Amount of Energy“
based on IEC 61851-1 Annex A**

**Draft 0.2
-previous version-**

Date: 13.01.2015

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General

Definitions:

- EA=EAmount: Amount of energy reflecting the EV's estimate how much energy is needed to fulfill the user configured charging goal for the current charging session. This might include energy for other purposes than solely charging the HV battery of an EV (as defined in ISO 15118).
- States X1/X2, Ax, Bx, Cx, as well as switch S2 are defined in IEC 61851-1 Annex A
- P=Number of phases; 1 or 3

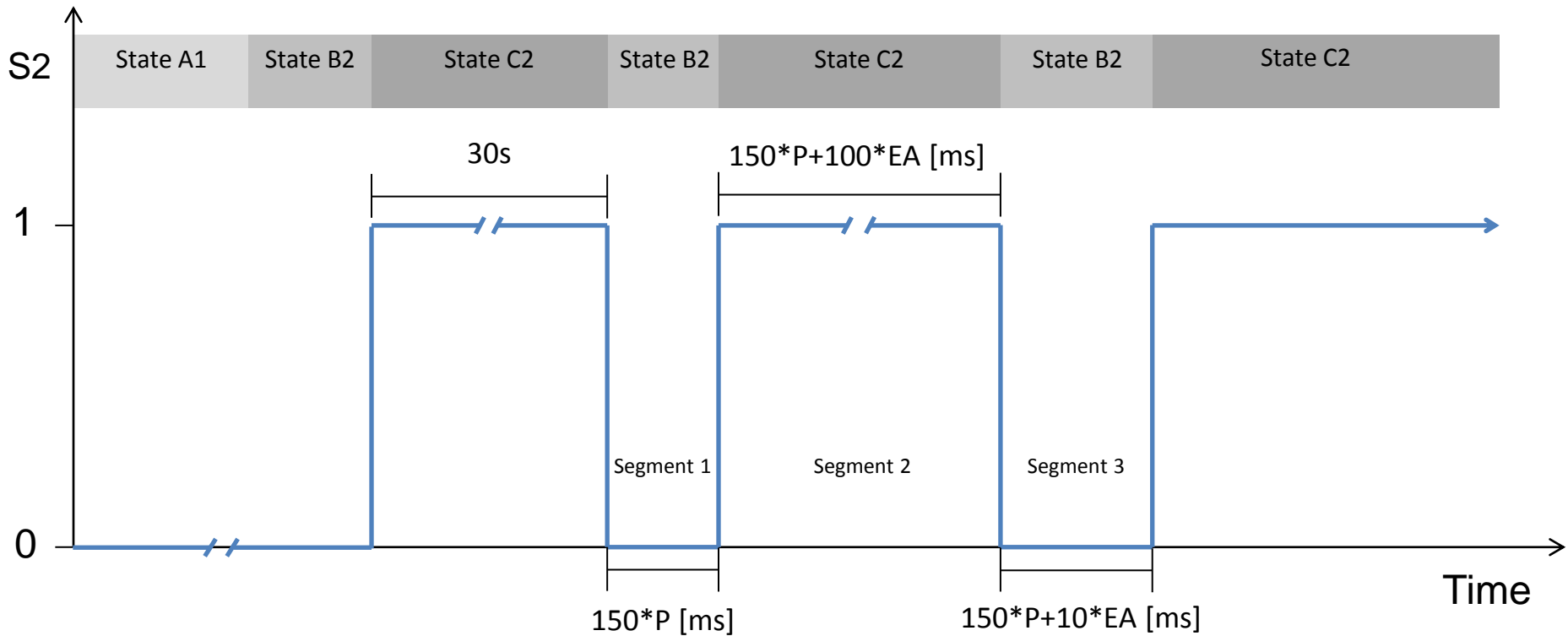
Scope:

A method is proposed based on the 61851-1 Annex A, which allows the EV to signal its EAmount to the charging station.

The target is that the method can be implemented without hardware modifications to the EVSE or EV, and backward compatibility is made possible.

Signalisation Sequence in State X2

EVSE ready to supply Energy



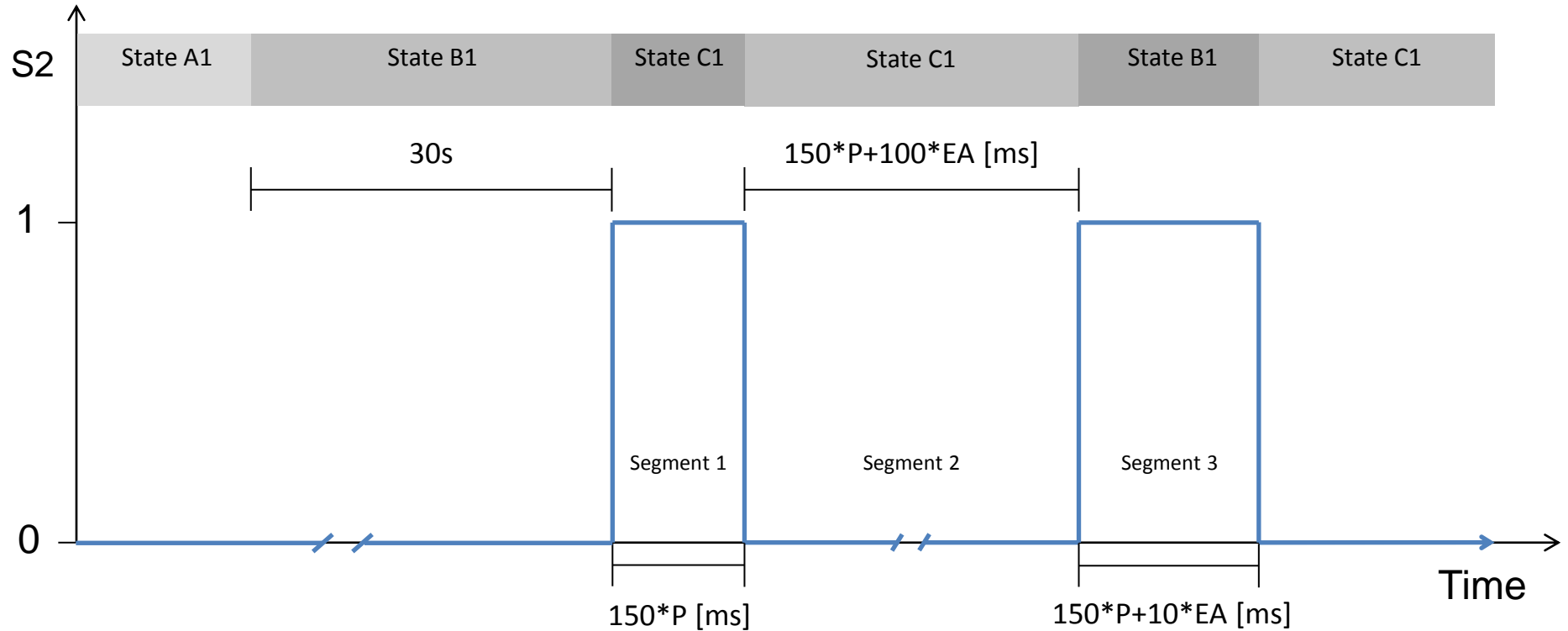
This sequence might be repeated by EV during a charging session to update EAmount.

Example for Signalisation of Energy Need
EAmount = 7,5kWh

	230V P=1	400V P=3
Segment 1	150ms	450ms
Segment 2	900ms	1200ms
Segment 3	225ms	525ms

Signalisation Sequence in State X1

EVSE not ready to supply Energy



This sequence might be repeated by EV during a charging session to update EAmount.