Five Criteria for 802.1Xbx - Port-Based Network Access
Control Amendment:
MAC Security Key Agreement protocol (MKA) extensions

1. Broad Market Potential
    a. Broad sets of applicability

    This amendment is applicable to all networks that
are currently
using or planning to use MACsec. The addition of this
capability will
further broaden the appeal and applicability of IEEE
802.1AE.

    b. Multiple vendors and numerous users

    A number of major equipment providers have
indicated support for
this amendment.

    c. Balanced costs (LAN versus attached stations)

    There is no imbalance of cost created by this
amendment.

2. Compatibility

    This amendment fits within the framework of IEEE
802.1X-2010, and
in particular within the design and specification of
the MACsec Key
Agreement protocol (MKA) without reducing the use and
applicability of
existing data elements and procedures, and without
changing existing
interoperability provisions. Implementations that
conform to the
existing standard will remain conformant.

3. Distinct Identity

    a. Substantially different from other IEEE 802
standards

    IEEE 802.1X is already a recognized and established
standard.

    b. One unique solution per problem (not two
solutions to a problem)

    This project enhances IEEE 802.1X to meet emerging
and additional
needs, it
does not duplicate existing capabilities.

    c. Easy for the document reader to select the
relevant specification

    IEEE Std 802.1X is already an established reference
for LAN security.

4. Technical Feasibility

    a. Demonstrated system feasibility

    The protocol extensions required for this amendment
are modest
within the existing context of 802.1X, and similar
capabilities are
routinely designed and deployed with other protocols.
In particular the
design of MKA is such that the simple addition of new
data elements does
not require redesign or reevaluation of its security
properties.

    b. Proven technology, reasonable testing

    Technology for testing similar capabilities has
been in widespread
use for a number of decades.

c. Confidence in reliability

    This project is expected to pose no new reliability
challenges. The
effects of suspending control plane operation are
simply quantifiable.

d. Coexistence of 802 wireless standards specifying devices for
unlicensed operation
    Not applicable.

5. Economic Feasibility

    a. Known cost factors, reliable data

    The fractional implementation costs involved are trivial.

    b. Reasonable cost for performance

    Data transfer performance would not be affected by the provisions
of the proposed amendment.

    c. Consideration of installation costs

    Deployment would occur as a control plane software upgrade with
typical associated cost. Deployment would be typically arranged to
coincide with other reasons for performing such an upgrade and would
only represent a fraction of the associated cost.