

## Separation of Access and Core Partitioning in the Local Space

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Source:

Roger B. Marks

EthAirNet Associates

404 Montview Blvd

Denver, CO 80207 USA

Voice:

+1 802 capable

E-mail:

roger@ethair.net

\*<http://standards.ieee.org/faqs/affiliationFAQ.html>>

Re: Proposed P802c PAR

Venue:

*IEEE 802 EC Privacy Recommendation Study Group, San Antonio, TX, USA*

Purpose:

To summarize privacy issues related to contribution IEEE 802-ec-14-0071, which addresses the proposed P802c PAR and the partitioning of the local address space.

Notice:

This document represents the views of the author and is offered as a basis for discussion.

# Separation of Access and Core Partitioning in the Local Space

Roger B. Marks  
EthAirNet Associates

# Reference

- This contribution is extracted from:
  - *Zonal Address Partitioning in the Local Space*
    - [IEEE 802-ec-14-0071](#)

# Scenario

- Half of IEEE 802 address space (with the 7th bit set on) is locally administered and not presumed globally unique.
- The IEEE-SA Registration Authority (RA) is assigning 24-bit CIDs with the 7th bit set on, suggesting their use in 802 addresses.
- Proposed P802c project would provide recommendations and rules for the 802 local address space, allocating a portion for protocols using the CID and another portion for local administration.
- Local space is being considered for temporary address assignments to alleviate privacy concerns related to static global addresses based on EUI.

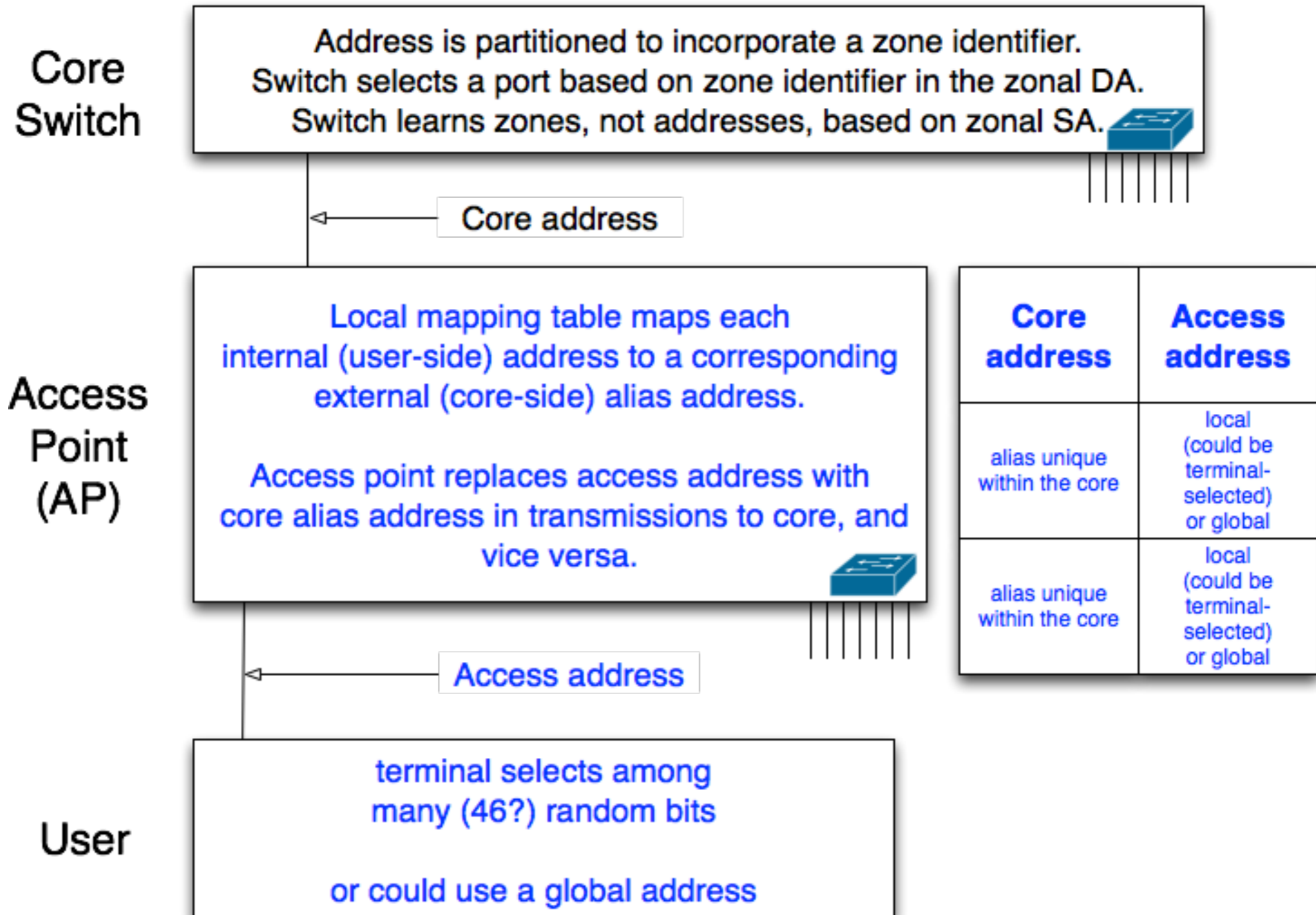
# Divergence of Views

- Some P802c proponents suggest dividing the local space using the CID, perhaps as an identifier of an address assignment or resolution protocol.
- Some, considering privacy, wireless, and access issues, prefer a wide-open, unstructured space to maximize entropy and privacy while minimizing collision probability.
- Should be possible to reach a common understanding, considering:
  - people are addressing different problems
  - the local space is *local* and does not require a universal solution
- Can a resolution of the conflict offer lead to better use of the local space?

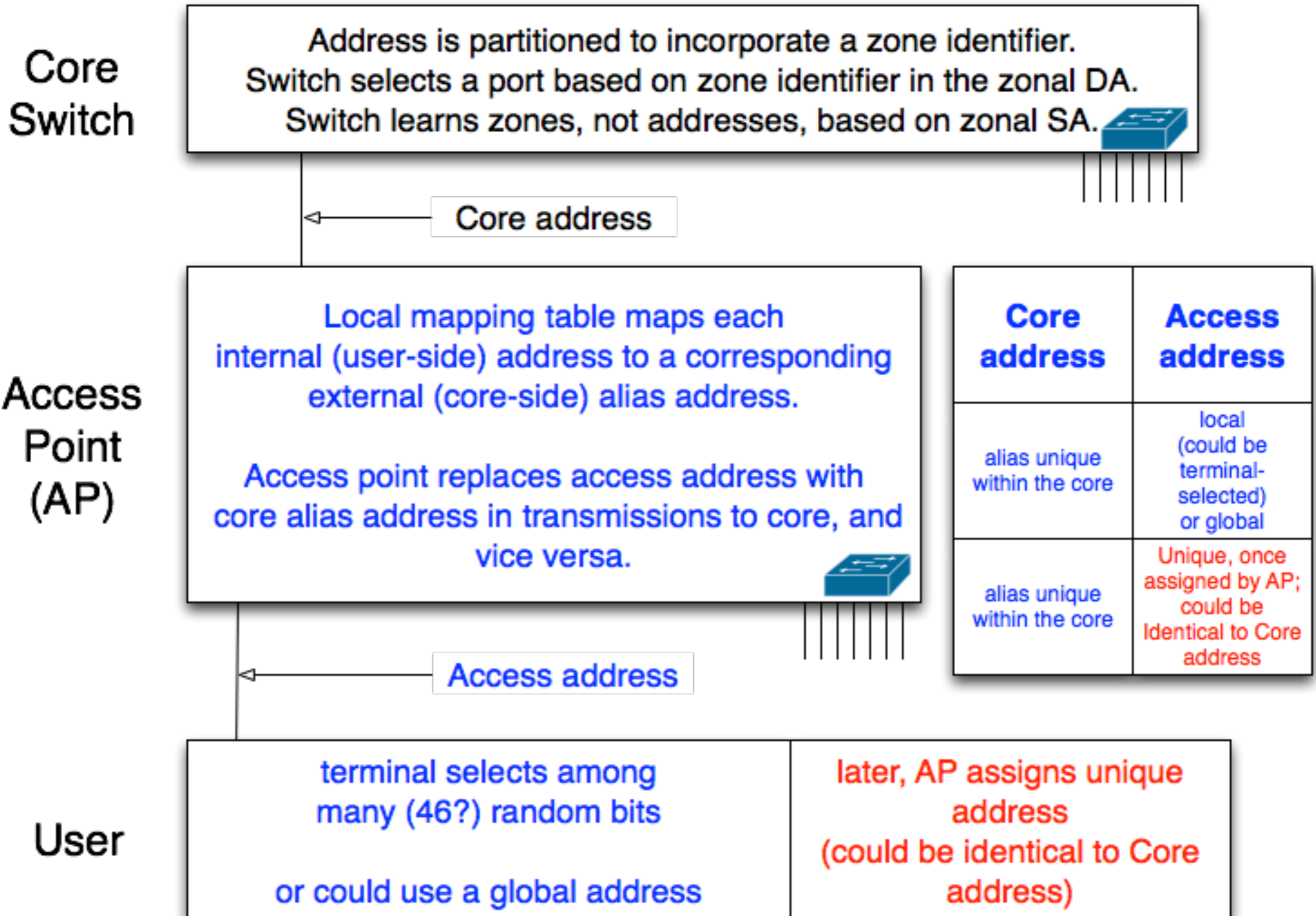
# Key Privacy Points of IEEE 802-ec-14-0071

- Partitioning the local space can add value in the core of the network.
  - zonal addressing is proposed as an example
- However, partitioning the local space in the core need not force a partitioning scheme in the access.
  - address aliasing can be used at the edge
- to reduce collisions, random addressing can be limited to temporary use
- privacy implications should be considered

# Address Aliasing



# Address Updating





# Notes

- randomized address would be temporary, so chance of collision might be negligible
- AP-assigned address need not be random; could be selected by AP with assurance of uniqueness within the system
- uniqueness could be achieved by, e.g., the proposal for zonal partitioning, in which case the AP owns a unique zone ID and manages the uniqueness of addresses incorporating that zone ID

# Privacy Questions

- Would such separation of the access and core address spaces resolve the conflict with P802c?
- Would a method like this allow privacy issues to be addressed?
- Are changes to the draft P802c PAR and CSD required to provide such flexibility?