ANAME: Address-specific DNS Name
Redirection (draft-hunt-dnsop-aname)

Peter van Dijk
Senior PowerDNS Engineer
with Evan Hunt and Anthony Eden
$ORIGIN example.com.
@     IN  SOA ... 
@     IN  NS  ns1
@     IN  A   192.0.2.1
www IN  CNAME example.com.my-cdn.example.net.
Current solutions

1. CNAME at apex
2. CNAME flattening
3. cron updates
4. ALIAS or ANAME from various commercial operators
5. ALIAS in open source PowerDNS auth
Creating a single standard

<table>
<thead>
<tr>
<th>Situation:</th>
<th>There are 14 competing standards.</th>
<th>14?! Ridiculous! We need to develop one universal standard that covers everyone's use cases. Yeah!</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soon:</td>
<td>Situation: There are 15 competing standards.</td>
<td></td>
</tr>
</tbody>
</table>

How standards proliferate: 
(See: A/C chargers, character encodings, instant messaging, etc.)
$ORIGIN example.com.
@     IN  SOA  ...
@     IN  NS   ns1
@     IN  ANAME example.com.my-cdn.example.net.
www IN  CNAME example.com.my-cdn.example.net.
Remember CNAME?

;; QUESTION SECTION:
;www.example.com. IN A

;; ANSWER SECTION:
www.example.com. IN CNAME example.com.my-cdn.example.net.
example.com.my-cdn.example.net. IN A 198.51.100
Compare ANAME

;; QUESTION SECTION:
@example.com. IN A

;; ANSWER SECTION:
@example.com. 86400 IN ANAME example.com.my-cdn.example.net.
@example.com. 86400 IN A 198.51.100
Concerns

- DNSSEC
- loops
- GSLB
- TTL limiting/counting down
Questions? Comments?

(If you think this is a good idea, please let the IETF dnsop WG know, the call for adoption is open now!)