Certs in E-mail
APPSAREA, IETF 88

Certs in transit

- **Client cert: can be ID for submission**

- **Server cert: rarely checked at all, DANE TLSA**

- **Sometimes used for closed networks**

Certs in retrieval

- **Client cert: never checked that I've seen**
- **Server cert: rarely checked at all**
- **Also DANE TLSA**

Certs in messages

From: me
To: you
Subject: blah

Message contents text
and other MIME stuff
S/MIME signature

- **S/MIME signatures and encryption**
- **Wide MUA support**
- **Key management stinks**