IPP Scheme
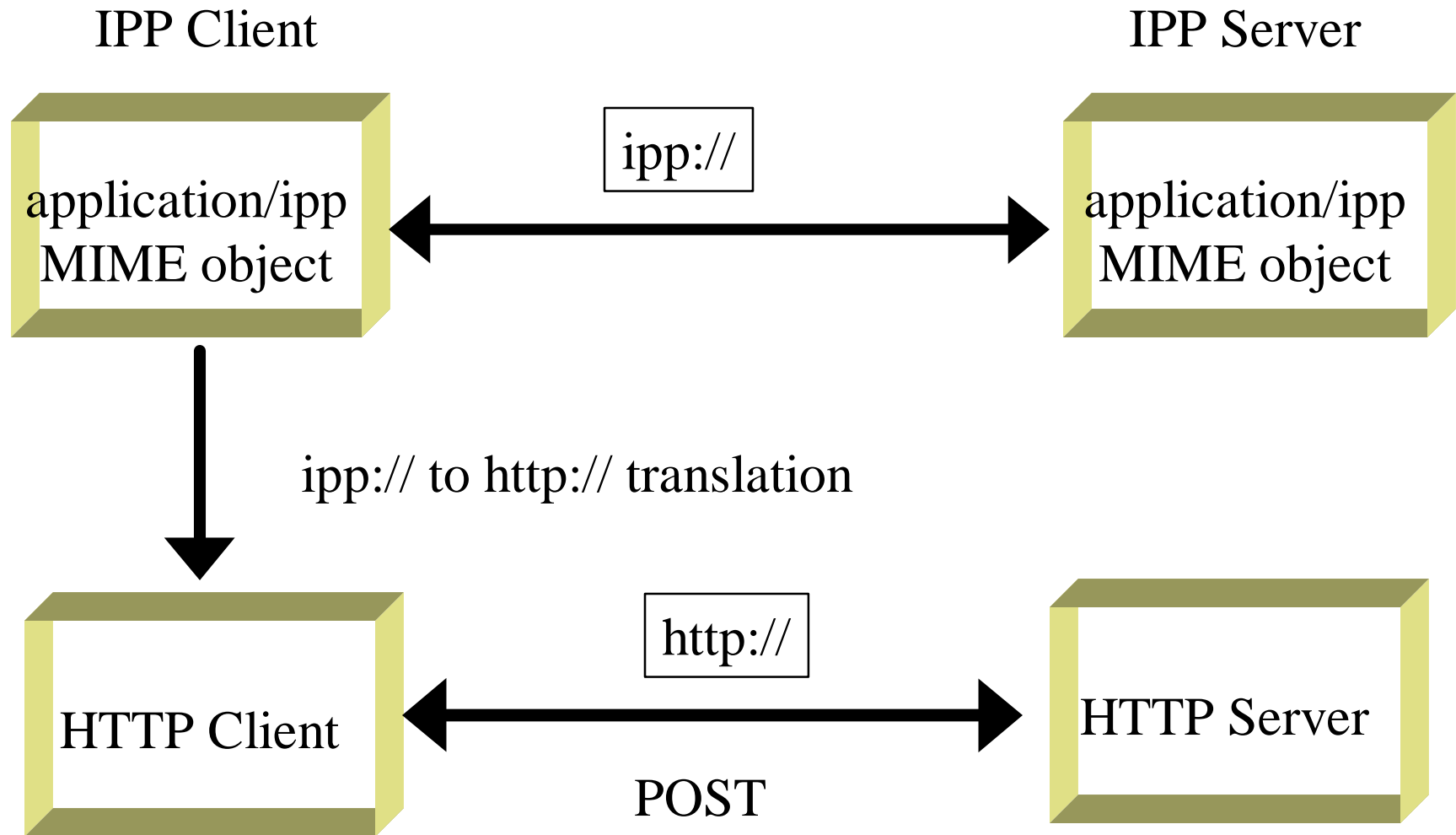
– Help users distinguish IPP objects from "other" web objects.

– Users will always see ipp:// as URL format for IPP Printers and IPP Print Jobs.

– ipp:// URLs are always used inside the application/ipp MIME object.

– The HTTP layer uses http:// URLs to transfer the application/ipp MIME objects.

IPP Scheme Usage

IPP Client   IPP Server

| application/ipp MIME object | ← ipp:// → | application/ipp MIME object |

ipp:// to http:// translation

| HTTP Client | ← http:// → | HTTP Server |

POST

IPP Scheme - Security (Client)

– Translation from ipp:// to http:// (or https://).

– Syntax :

ipp://host [:port]/<ipp-specific-path>;parameters

– Parameters are currently for security only

- AUTH = secure-protocol
- Secure-protocol := "TLS" | "SSL3" | "DAA"
- Parameters translated into HTTP header.

IPP Scheme - Security(Server)

- – Job URI generated in response to a client created job request.
- – URIs will use IPP scheme with IPP security parameters.
- – Specified security-protocol must match.
- – Unless other port is specified, (e.g. 443 to use https://), IPP default port 631 is used.

IPP Scheme - Example 1

- *Example using TLS.*
- ipp://www.xerox.com/printer-wiley;AUTH=TLS
- TLS is used as secure transport protocol.
- Translate to HTTP scheme:
  - http;//www.xerox.com:631/printer-wiley
- HTTP Header:
  - Upgrade: TLS/1.0
- This is the standard HTTP with TLS method.

IPP Scheme - Example 2

- *Example using no security.*
- ipp://www.xerox.com/printer-wiley/
  - Port 631 is used as default port.
- ipp://www.xerox.com:80/printer-wiley
  - Port 80 is used for connecting to the printer.
- ipp://www.xerox.com:631/es-adstc/printer-wiley
  - Port 631 is explicitly mentioned.

IPP Scheme - Example 3

- *Example using DAA.*
- ipp://www.xerox.com:80/printer-wiley;AUTH=DAA
- DAA is used as a security channel.
- Port 80 is used for communication.

IPP Scheme - Translation Example

- *Translation into HTTP header*.

- POST /printer-wiley/es-adstc-queue HTTP/1.1

- Host: www.xerox.com:631

- Security-Protocol: TLS

- Content-type: application/ipp

- Transfer-Encoding: chunked

IPP Scheme - Server Example

- *At the server end.*

- ipp://www.xerox.com/printer-wiley/job-status/

  - Client can use this to query job status.

- ipp://www.xerox.com/printer-wiley/es-adstc-submit;AUTH=TLS

  - Client can use this for job submission.

  - Security protocol preserved.