

Presence  
&  
Integrated  
Communications  
&  
Automated Location  
Services

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# Internet2 PIC working group

The aim of the PIC working group is to recognize the generational change already taking place in computer-mediated communication and foster its deployment based on the IETF RFC 3261 SIP (Session Initiation Protocol) standard and related extensions.

(<http://pic.internet2.edu>)

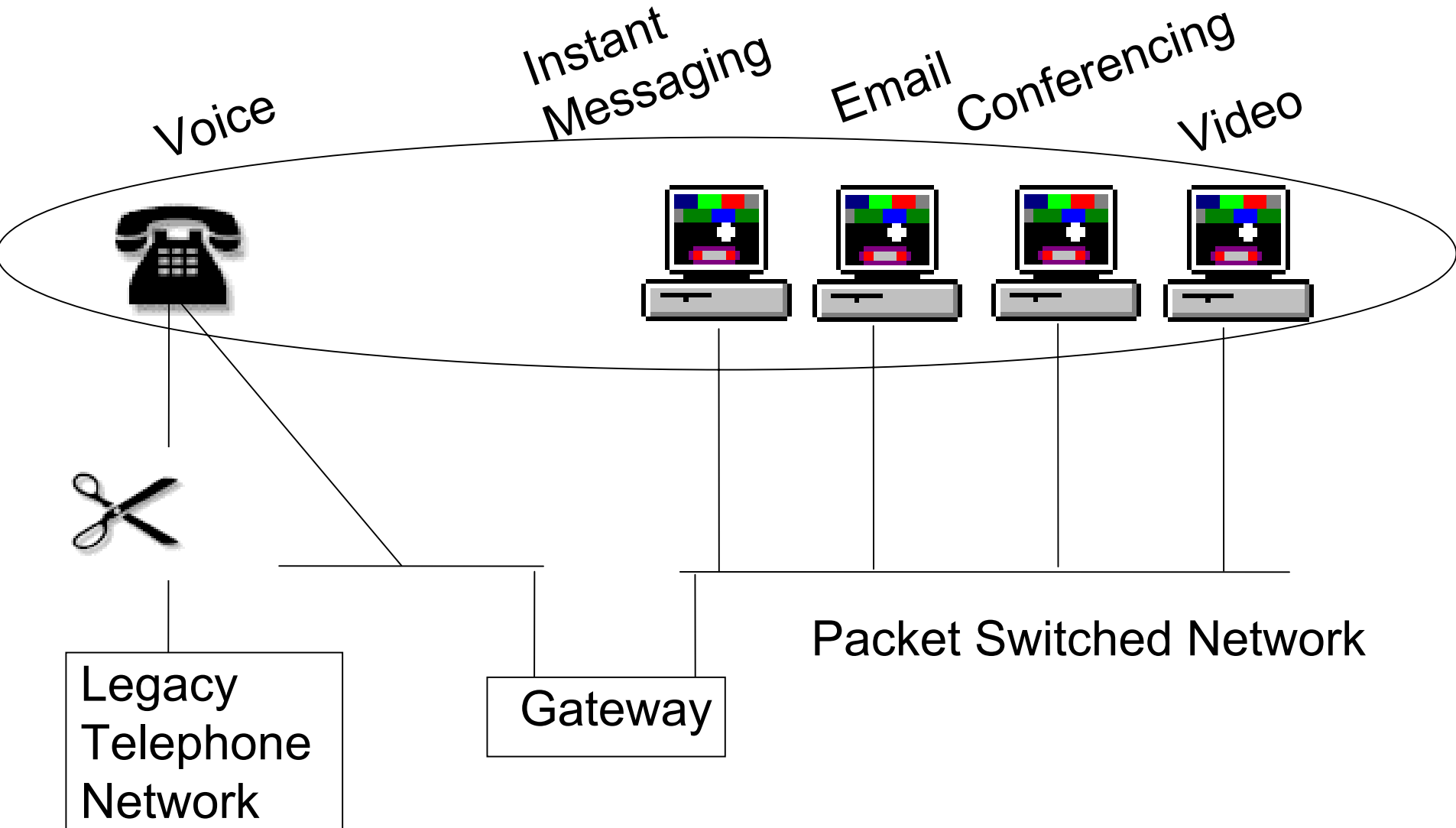
# Some Definitions

**Presence** has been defined as "the willingness and ability of a user to communicate with other users on the network."

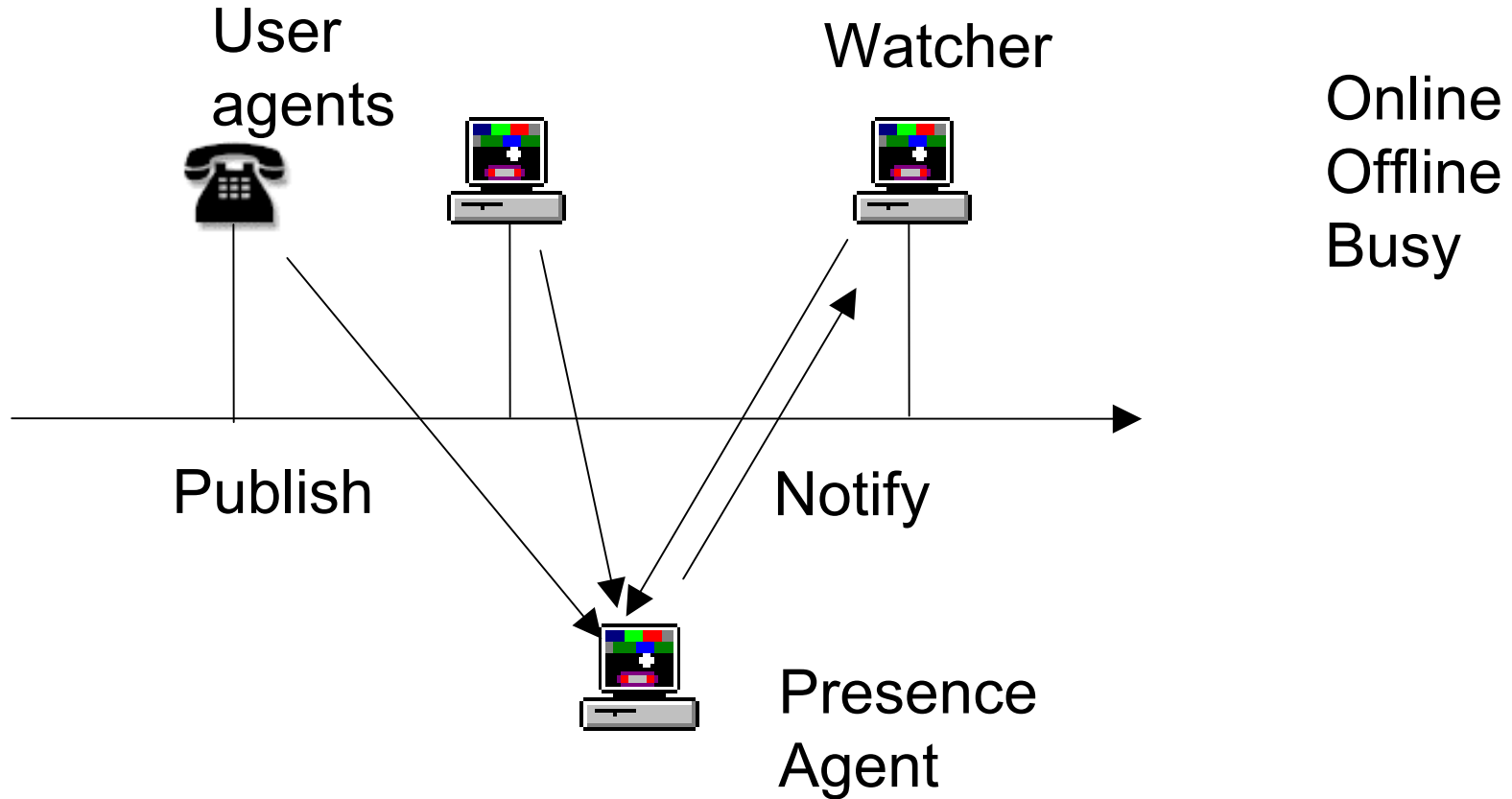
**Integrated Communications** is the aggregation of multiple communications elements in the context of Presence. Such elements include, but are not necessarily limited to, soft phones, 3GPP-based cellular phones, instant messaging, email, voice mail, still imaging, directories, calendaring, audio conferencing and video conferencing.

**Automated Location Services** supplies geographic information about a person, resource or other entity to applications requiring it.

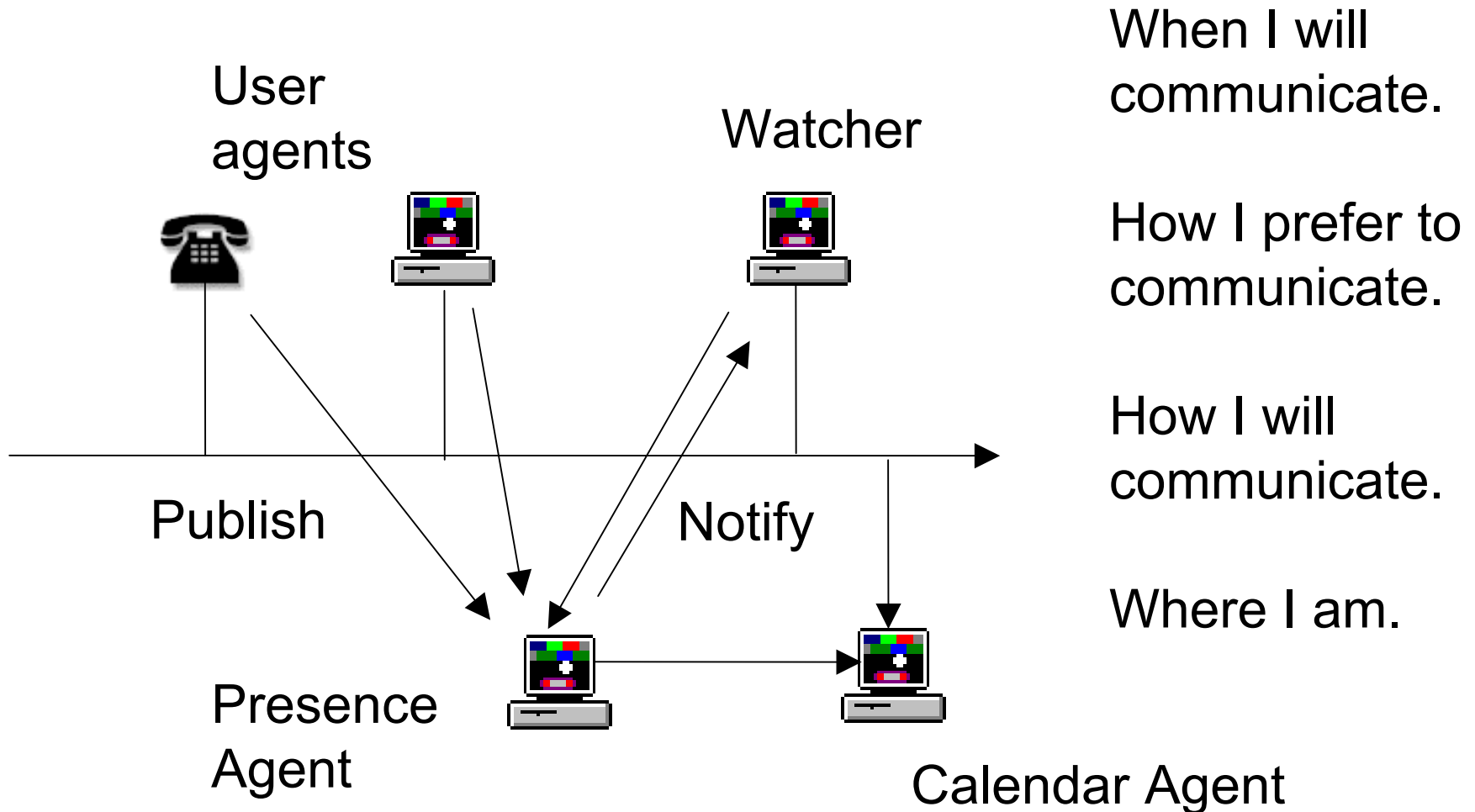
# What does it mean to integrate communications?



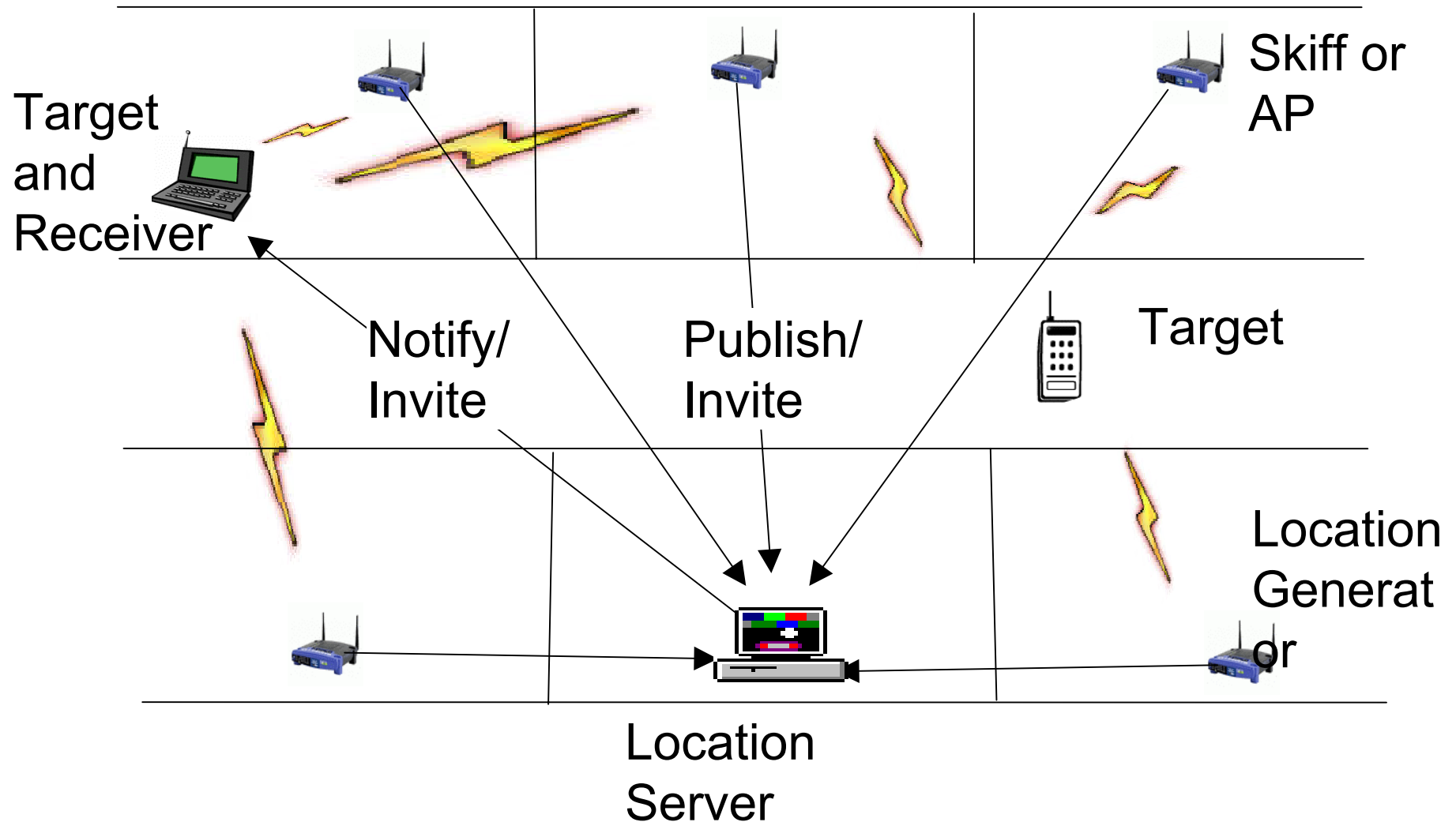
# Minimally, it requires the addition of Presence



# Rich Presence expands the basic initial value dramatically



# Automated Location Services adds even more value



# Example Rich Presence page

## jeremy.george@yale.edu in Helpdesk

### Rich Presence Demo Page

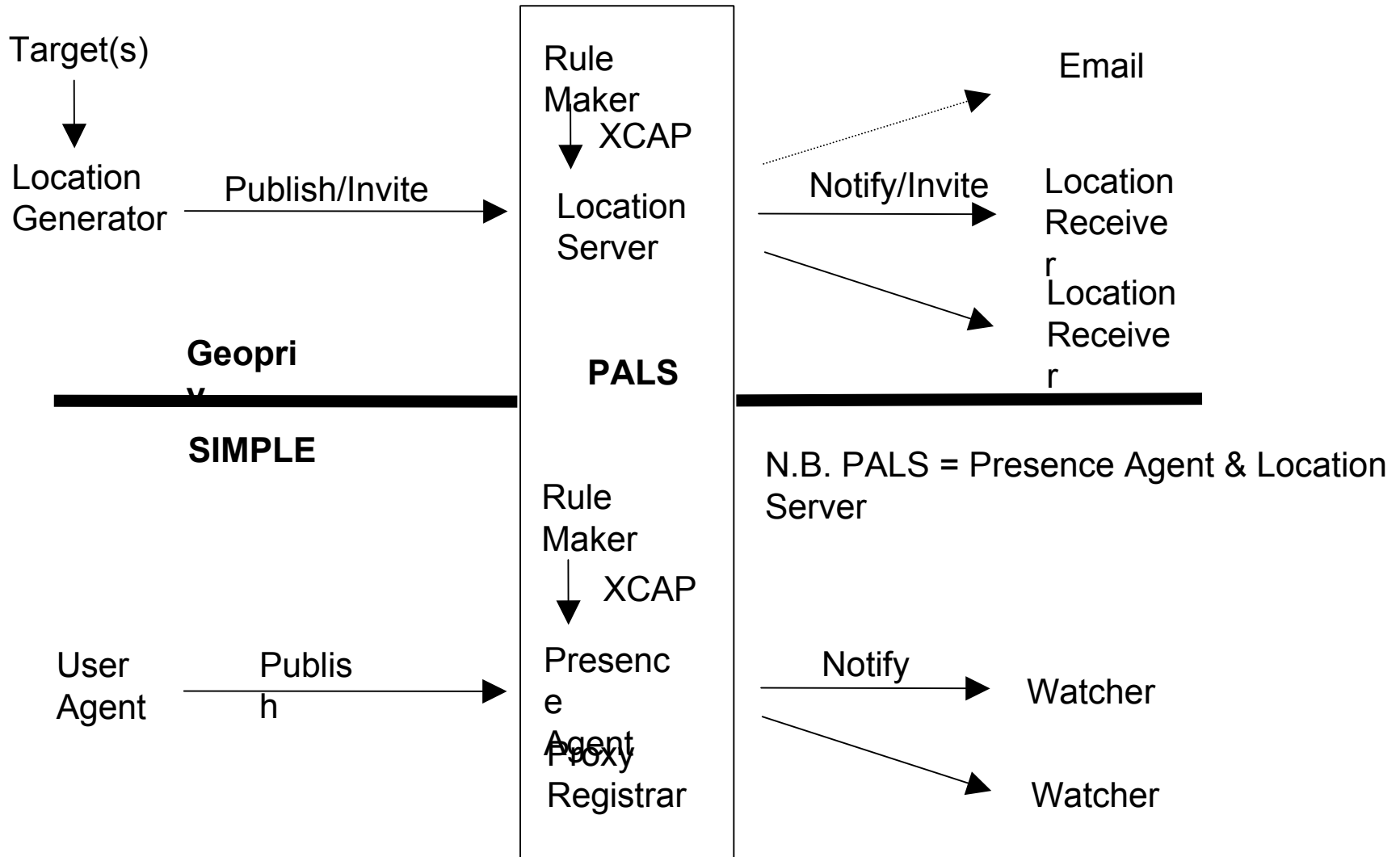
Name <email>	Online / Offline	Location	Updated
Arthur Gaylord <agaylord@whoi.edu>	Online	Marriott Ballroom, 7 - No Session	14:30
Jeremy George <a href="mailto:jeremy.george@yale.edu">jeremy.george@yale.edu</a>	Online	Helpdesk	13:00
Alice Cooper <alice@bigu.edu>	Online	Santa Fe - Facilitating Faculty	
		Outreach - over in 10 minutes	13:50

pals.internet2.edu/loc & pals.internet2.edu/external)

# Use Cases

- Two freshmen
- Conference pounce
- Furnace repair
- Desperately in need of Pizza
- Moving from hall to office

# Current Issues – SIMPLE & Geopriv terminology



# Finding Location Services

```
_slp._tcp.bigu.edu 43200 in srv 0 0 service-server.bigu.edu
```

In the general case where multiple service location generators are likely the problem becomes much harder. To solve this issue something like a service parsing service may be needed. This appears to be a fundamentally difficult problem. Possibly a hierarchy something like the following could be used:

```
_slp._tcp.lat41Nlon71W... --> srv records at service.parser.com  
_slp._tcp.service-parser.com 43200 in srv 0 0 service.feeder1.com  
_slp._tcp.service-parser.com 43200 in srv 0 0 service.feeder2.com
```

# Presentities

Presentities certainly may represent people but they may also represent locations. In the most general case an object has location and a location may contain objects. For example:

rooms	sip:mainstreet-221@littleu.edu has in it: sip:alice@bigu.edu • • •
people	sip:alice@bigu.edu is located in sip:mainstreet-221@littlu.edu

# Presentities

Thus rooms have people in its contact list and a person has location  
So, a new event package is needed.



# Distance

Take the case of finding a service within two miles of the User Agent. Should a service 1.999 miles away be reported but not one 2.001 miles away? And what if the one 1.999 miles away is across a river where the nearest bridge is 12 miles away?

# Further Reading

[www.ietf.org/html.charters/sip-charter.html](http://www.ietf.org/html.charters/sip-charter.html)

RFC3261        SIP: Session Initiation Protocol

RFC3263        SIP: Locating SIP Servers

[www.ietf.org/html.charters/simple-charter.html](http://www.ietf.org/html.charters/simple-charter.html)

draft-ietf-simple-presence-10.txt

draft-ietf-simple-xcap-01.txt

[www.ietf.org/html.charters/geopriv-charter.html](http://www.ietf.org/html.charters/geopriv-charter.html)

draft-ietf-geopriv-reqs-04.txt

draft-ietf-geopriv-policy-00.txt