

Offnet Sourcing with the Multicast Menu

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Components

- Multicast Menu
- Offnet Sourcing
- tjTV
- Demos!



Multicast Menu

<https://menu.treedn.net>

Multicast Menu View Streams Add Stream Manage Streams Broken Streams Logout

Available content is listed below.
Make sure you have [VLC 4.0](#) or later installed.






Elephants Dream Video Stream CAAREN Source: 162.250.138.201 Group: 232.162.250.139	Sintel Video Stream CAAREN Source: 162.250.138.201 Group: 232.162.250.140	All the episodes of "The Routing Table Podcast" https://routingtable.cloud/ CAAREN Source: 162.250.138.201 Group: 232.162.250.141
Big Buck Bunny Video Stream CAAREN Source: 162.250.138.201 Group: 232.162.250.138	Calm Sounds of MC36 MC36 Source: 10.2.255.1 Group: 232.2.3.2	

Features

- Register/add multicast streams
 - Automated scraping of Internet2** and GEANT Looking Glasses
 - Manually report
 - Upload file
 - API
- Manage streams
- View streams
 - Click button -> Download .m3u -> Open w/VLC
- TODO:
 - specify amt-relay
 - verify manual streams
 - protocol handler for opening from browser













Improvements

by Todor Moskov, TU Berlin

Multicast Menu Search...   View Streams  Add Stream  Manage Streams  Logout

Categories: **All** Educational

16 available streams are listed below (showing 1 to 16).
Make sure you have [VLC 4.0](#) or later installed.

 Elephants Dream Video Stream CAAREN, US	 Big Buck Bunny Video Stream CAAREN, US Trending ad	 NASA first 8k video from space (downscaled to 1080p) KANREN, US	 Sintel Video Stream CAAREN, US
 Spring (1080p) KanREN	 Yellowstone National Park (8k) KanREN	 4Discoveries (NSF) KanREN	 Yellowstone National Park (1080p) KanREN
 Llamigos (1080p) KanREN	 Research presentations from the KanREN	 Research presentations from the Computer KanREN	 Research presentations from the KanREN

Features

- Thumbnail for each stream*
- UI overhaul
- Stream categories
 - “Liked”
 - “Trending”
 - “Editor’s Choice”
 - by genre

Offnet Sourcing

Android: [Multicast Live](#)
iOS: [Haivision Play](#)



```
live@multicast-menu: /root
File Edit View Terminal Tabs Help
SrtCommon: ... done.
Opening SRT source listener on :9997
Binding a server on :9997 ...
listen...
accept...
connected.
Accepted SRT source connection
SRT source disconnected
SrtCommon: DESTROYING CONNECTION, closing sockets (rt%295363554 ls%-1)...
SrtCommon: ... done.
Opening SRT source listener on :9997
Binding a server on :9997 ...
listen...
accept...
connected.
Accepted SRT source connection
SRT source disconnected
SrtCommon: DESTROYING CONNECTION, closing sockets (rt%295363552 ls%-1)...
SrtCommon: ... done.
Opening SRT source listener on :9997
Binding a server on :9997 ...
listen...
[0] 0:srt-live-transmit* "multicast-menu" 17:21 14-Jul-22
```

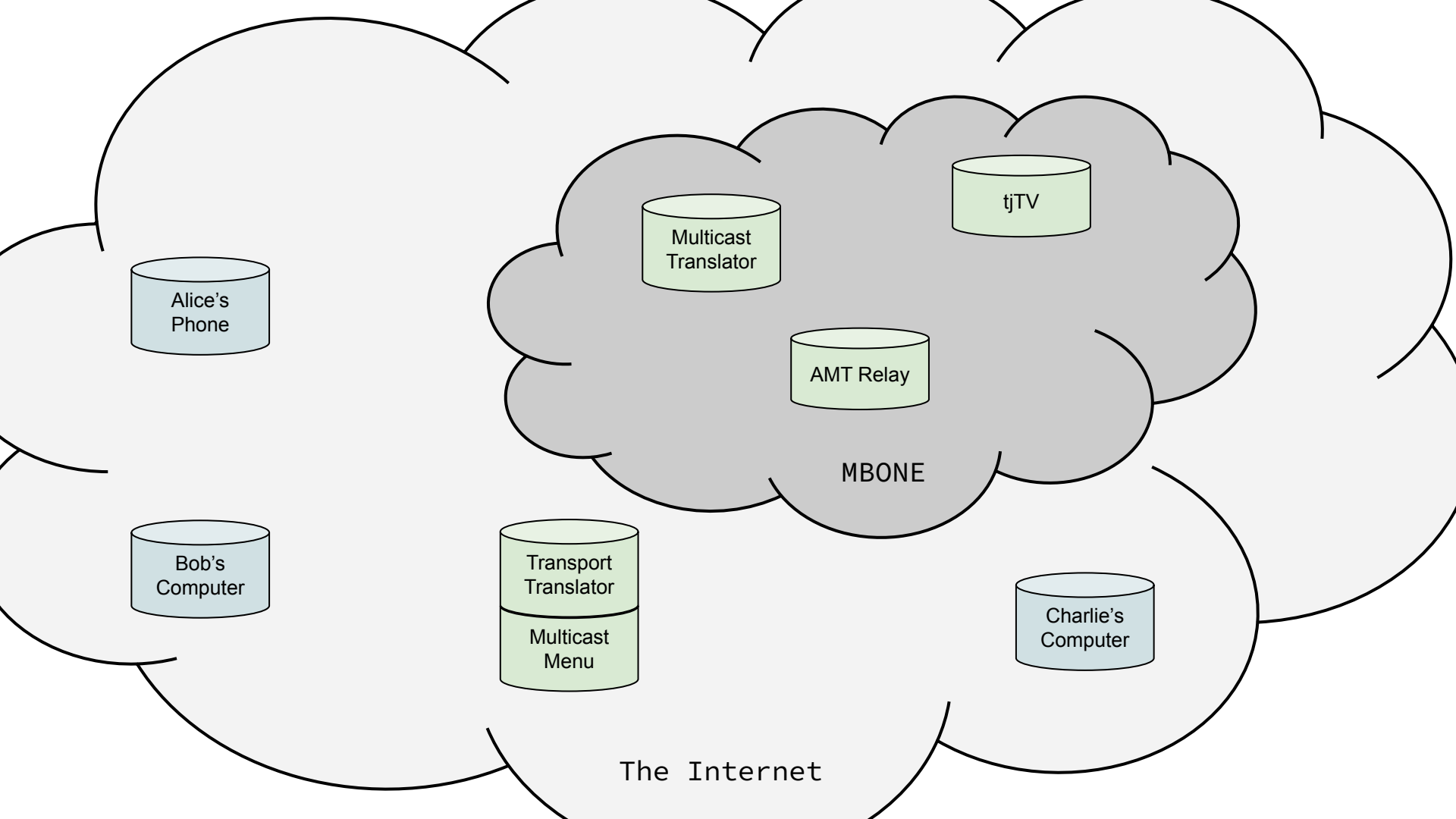
```
lauren@unicast-translator: ~
File Edit View Terminal Tabs Help
.. x lauren@unicast-translator: ~ x
read timeout: nothing to be translated this iteration
read timeout: nothing to be translated this iteration
read timeout: nothing to be translated this iteration
read timeout: nothing to be translated this iteration
read timeout: nothing to be translated this iteration
read timeout: nothing to be translated this iteration
read timeout: nothing to be translated this iteration
read timeout: nothing to be translated this iteration
read timeout: nothing to be translated this iteration
Multicast address (232.252.17.145, 9002) allocated for [redacted] (42859).
Added port://162.250.138.11@232.252.17.145:9002 to the Multicast Menu (source=('5
[redacted], 42859)). The access code is XKoxxt6WtXkJcQYrFJA7Nkr6Qb4lmawnz5Wh1
Sgm.
read timeout: nothing to be translated this iteration
read timeout: nothing to be translated this iteration
read timeout: nothing to be translated this iteration
read timeout: nothing to be translated this iteration
read timeout: nothing to be translated this iteration
read timeout: nothing to be translated this iteration
read timeout: nothing to be translated this iteration
read timeout: nothing to be translated this iteration
[0] 0:python3* "unicast-translator" 13:28 14-Jul-22
```

Features

- First: SRT
 - Sender - app
 - Receiver - Transport Translator
- Then: UDP
 - Sender - Transport Translator
 - Receiver - Multicast Translator
- TODO
 - fix encoding
 - add AMT gateway implementation
 - ios version



Group: 232.44.15.25		
Yellowstone National Park (8k) KanREN Source: 164.113.60.17 Group: 232.44.15.30	4Discoveries (NSF) KanREN Source: 164.113.60.17 Group: 232.44.15.28	Yellowstone National Park (1080p) KanREN Source: 164.113.60.17 Group: 232.44.15.29
Llamigos (1080p) KanREN Source: 164.113.60.17 Group: 232.44.15.26	Research presentations from the Biotechnology and Life Sciences Lab Thomas Jefferson High School for Science and Technology Source: 198.38.23.146 Group: 232.198.38.1	Research presentations from the Computer Systems Lab Thomas Jefferson High School for Science and Technology Source: 198.38.23.146 Group: 232.198.38.2
Research presentations from the Neuroscience Lab Thomas Jefferson High School for Science and Technology Source: 198.38.23.146 Group: 232.198.38.3	Research presentations from the Quantum Information and Optics Lab Thomas Jefferson High School for Science and Technology Source: 198.38.23.146 Group: 232.198.38.4	Research presentations from the Automation and Robotics Lab Thomas Jefferson High School for Science and Technology Source: 198.38.23.146 Group: 232.198.38.5
No description available Android App Demo Source: 162.250.138.11 Group: 232.46.206.31	No description available NTANET Source: 128.39.200.167 Group: 225.0.0.222	



Alice's
Phone

Multicast
Translator

tjTV

AMT Relay

MBONE

Bob's
Computer

Transport
Translator

Multicast
Menu

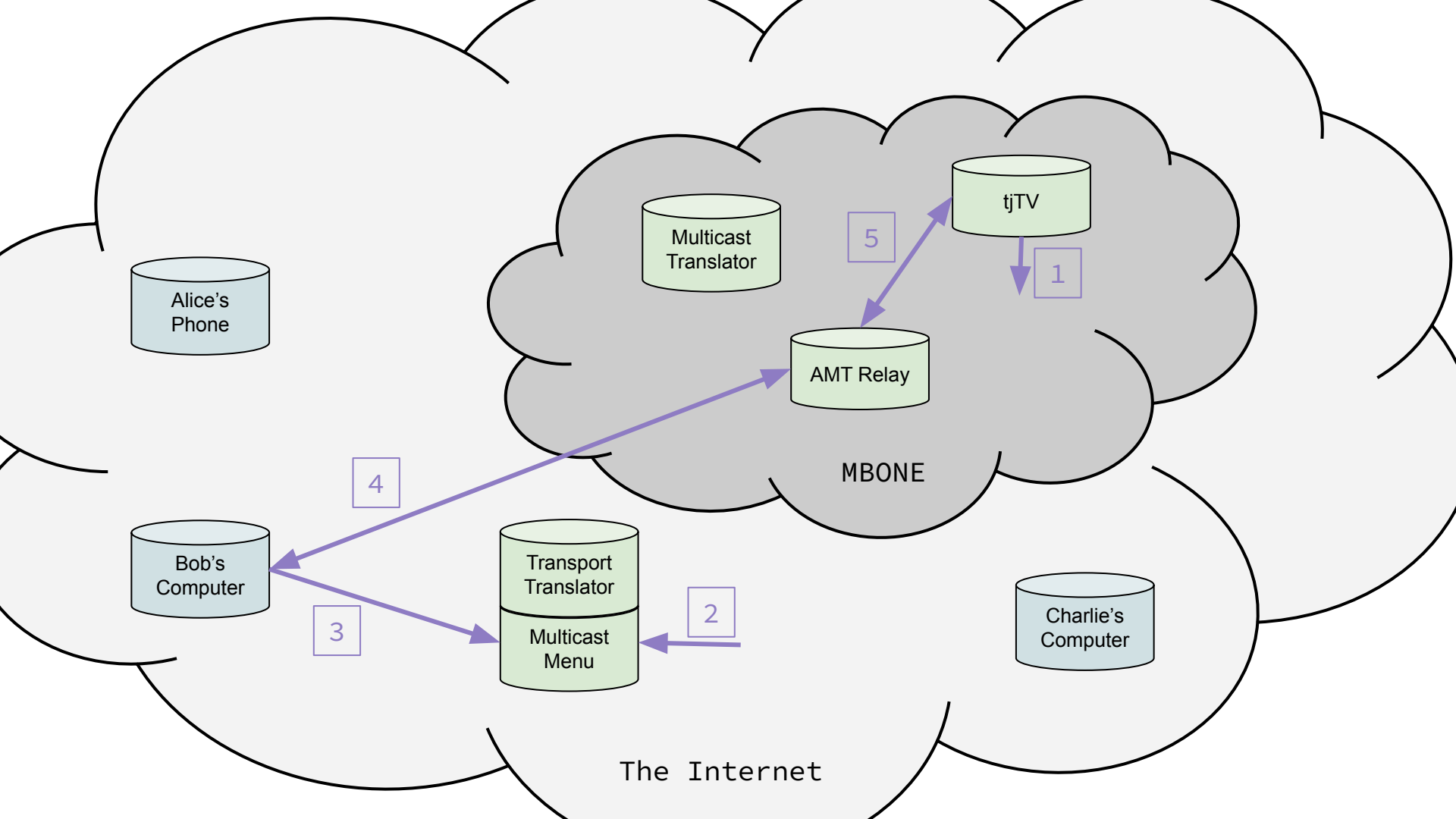
Charlie's
Computer

The Internet

tjTV Demo

Viewing tjTV

1. Navigate in MM
2. Open in VLC
3. Watch!



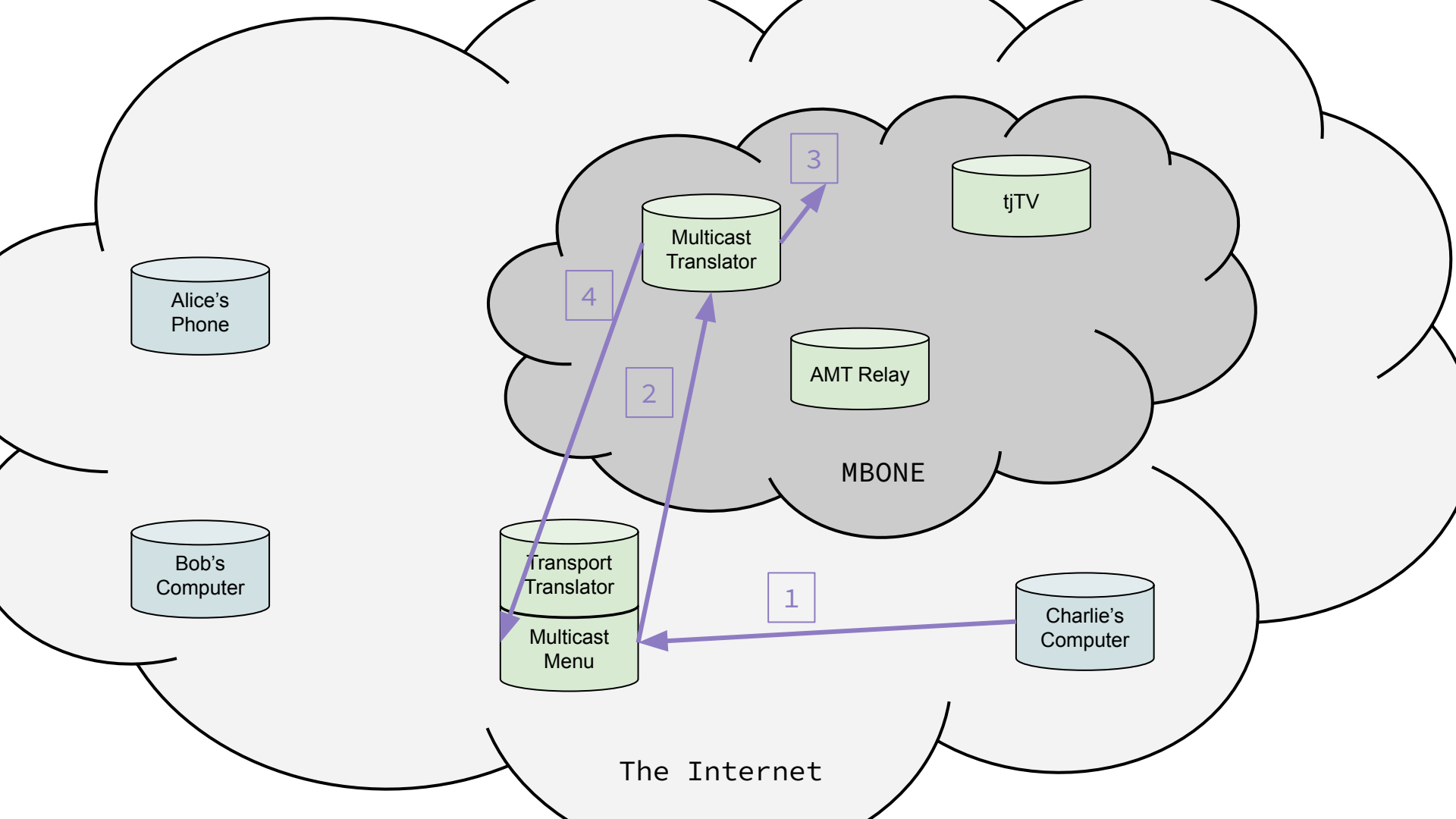
Multicast Menu Demo

Streaming from a file

1. Upload to MM
2. Check MM for entry
3. Open in VLC
4. Watch!

...

5. Stop Stream
6. Automatic tear down



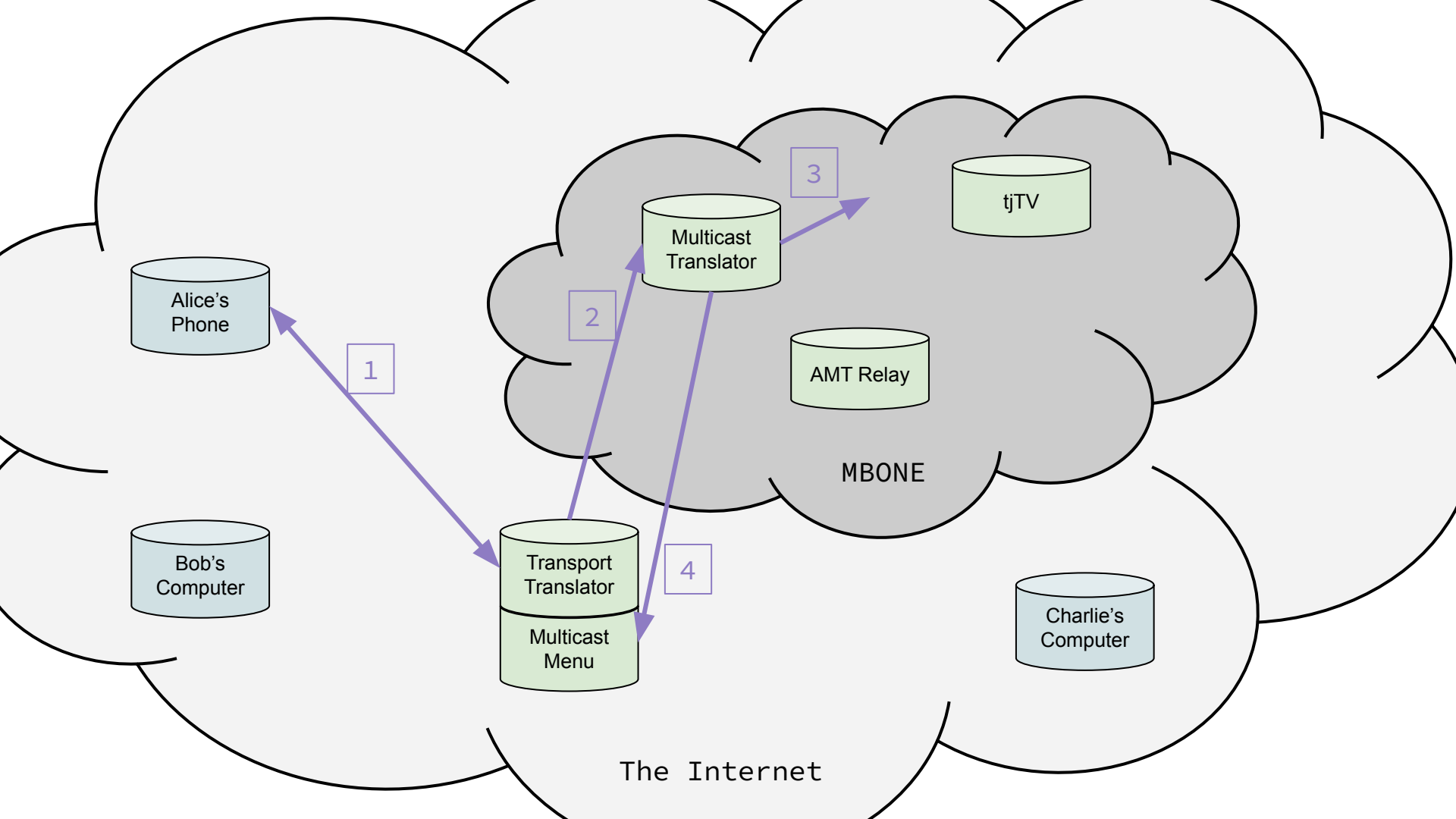
Offnet Sourcing Demo

Live Streaming This
Meeting

1. Open ~~Multicast Live~~
2. Start Stream
3. Check MM for entry
4. Watch!

...

5. Stop Stream
6. Automatic tear down



Active-ish Development

— — —

Multicast Menu

<https://github.com/Laur04/multicast-menu>

Multicast Live

<https://github.com/Laur04/multicast-live>

Unicast Translator

<https://github.com/JNPRAutomate/unicast2multicast-translator/blob/main/translator.py>

