

# How I built a cloud based service with help from AIR 2.0

by John Mason

# What are we talking about?

- Open cloud framework
  - Group of open source cloud services
  - 1<sup>st</sup> Service: File Synchronization between AIR clients

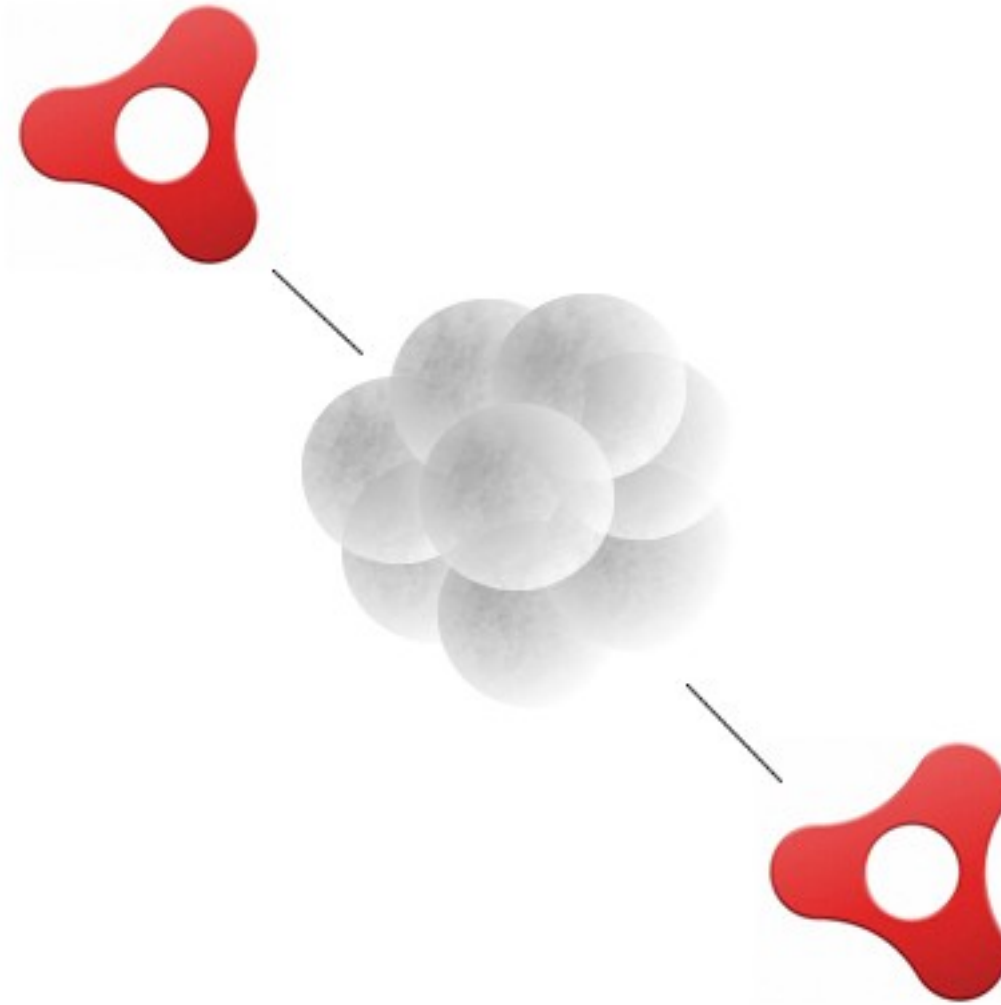
# What are we talking about?

- I'll go over the particular problems encountered during the development and the solutions used.
  - How to share the files? What protocols to use?
  - How to find the other clients?
  - How to deal with the threading constraints?
  - How to handle the file deletions?
  - And finally how to secure the files?

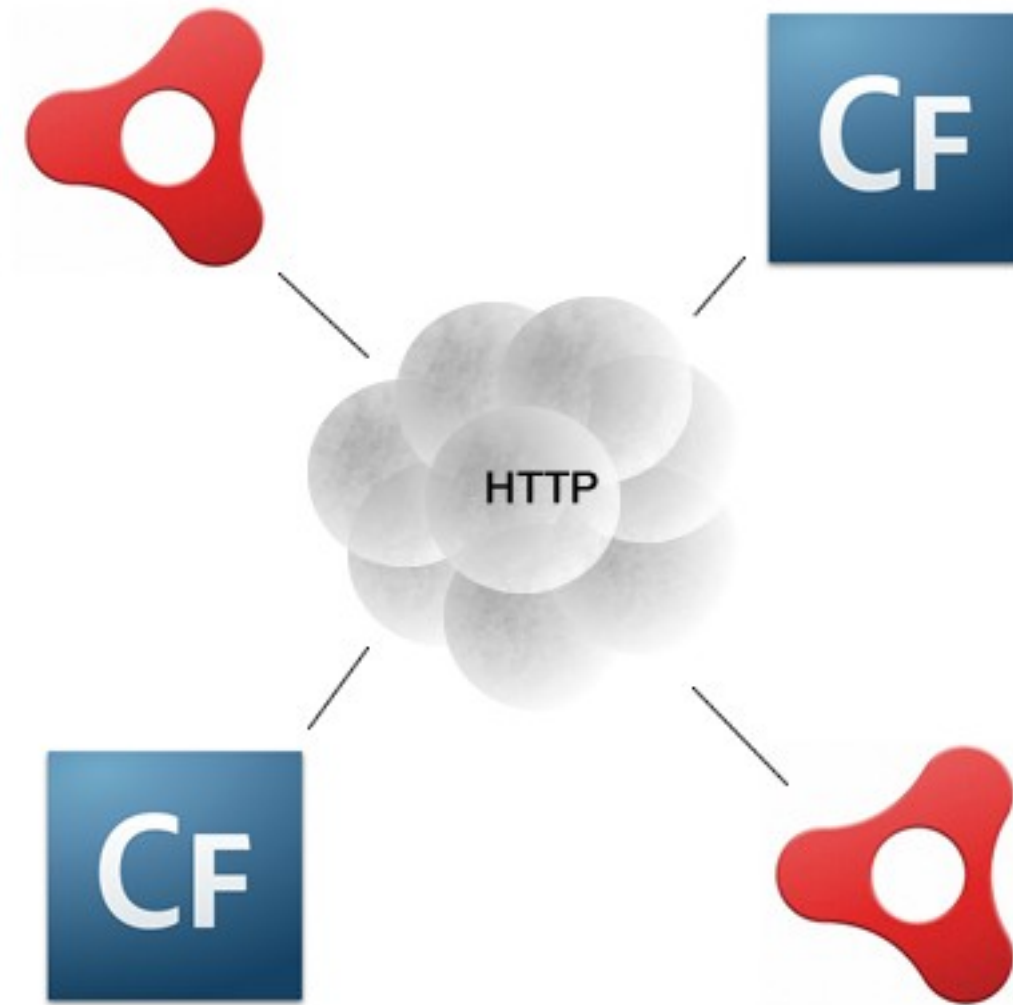
# About Me

- Been working with Flex since version 2
- Founder and past president of the Atlanta Flash/Flex UG
- Current president of the Atlanta CFUG
- Manage the Online Flex Meetup
- Blog [codfusion.com](http://codfusion.com)
- Twitter at [john\\_mason\\_](https://twitter.com/john_mason_)

# Problem 1 – Sharing Files



# Problem 1 – Sharing Files



# Problem 1 – Sharing Files

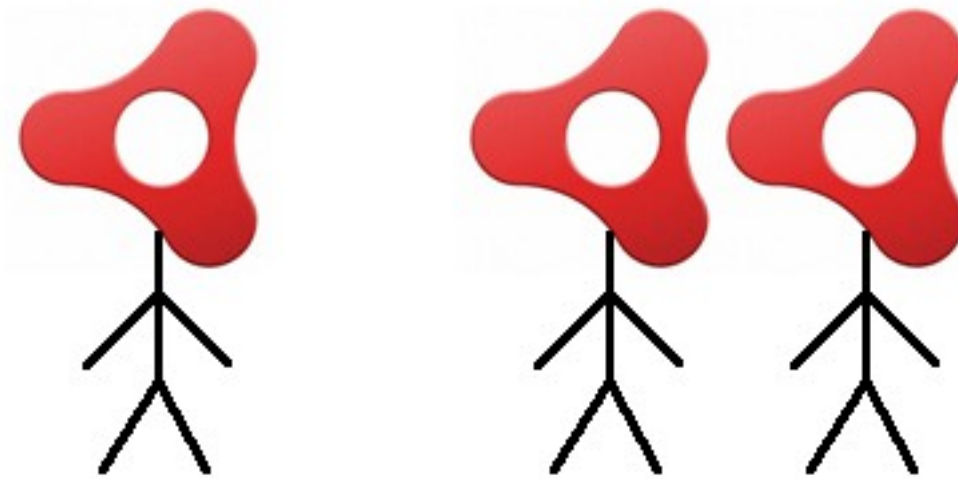
- HTTPServer class
  - Based on the new AIR 2 ServerSocket
- FileDownloader class
  - Handles downloading of files

# Problem 2 – Finding other people



Any one here?

# Problem 2 – Finding other people



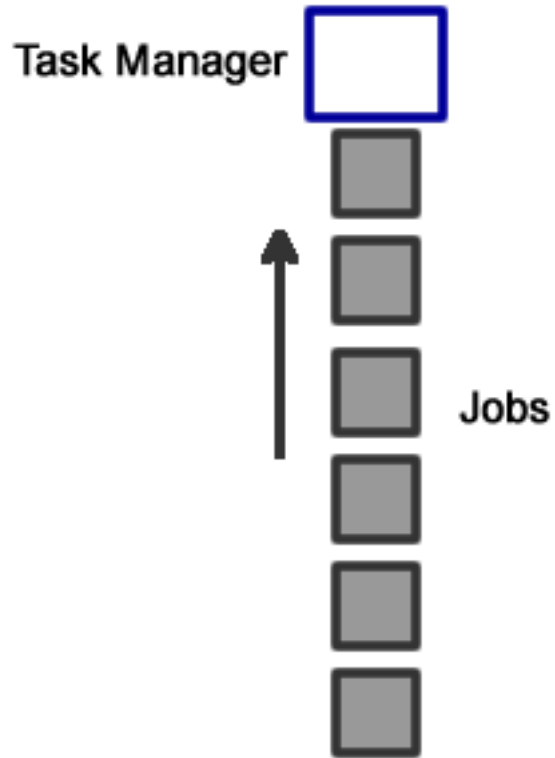
# Problem 2 – Finding other people

- LocalNetwork detection
  - Scanning local network
- ExternalNetwork detection
  - Linking external AIR or CF servers

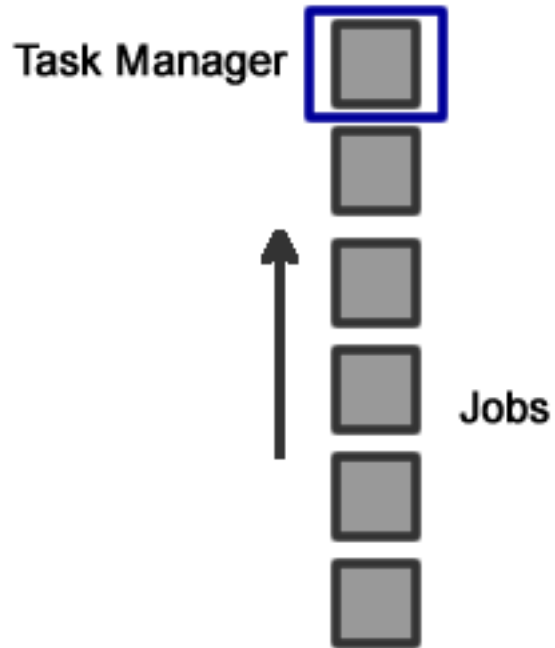
# Problem 3 – Threading constraints

- Task Manager class
  - To handle large number of downloads
  - Defer download jobs over time

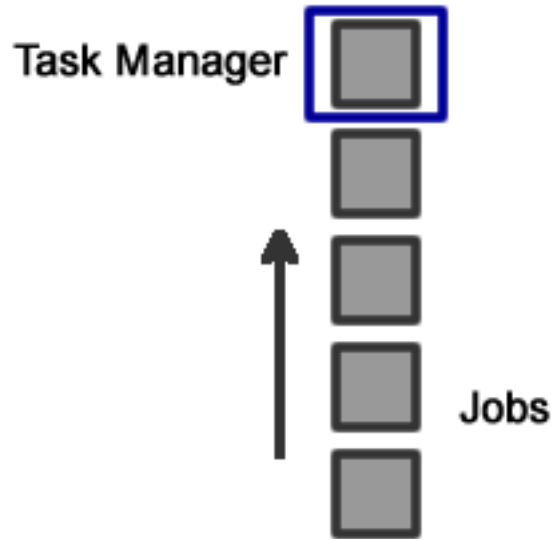
# Problem 3 – Threading constraints



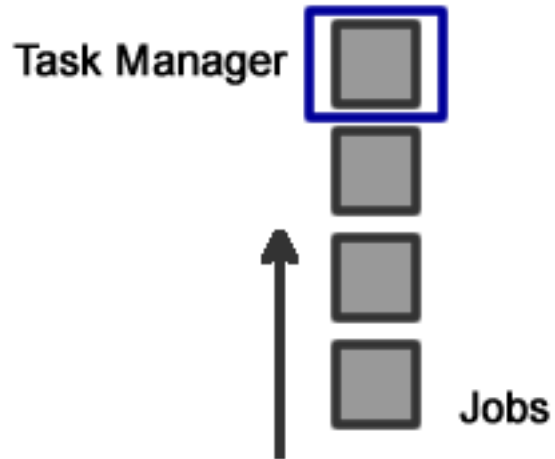
# Problem 3 – Threading constraints



# Problem 3 – Threading constraints



# Problem 3 – Threading constraints



# Problem 4 – File Deletions

- FileDeletion Manager class
  - Stop downloading a deleted file
  - What happens if someone deletes a file and then puts it back in

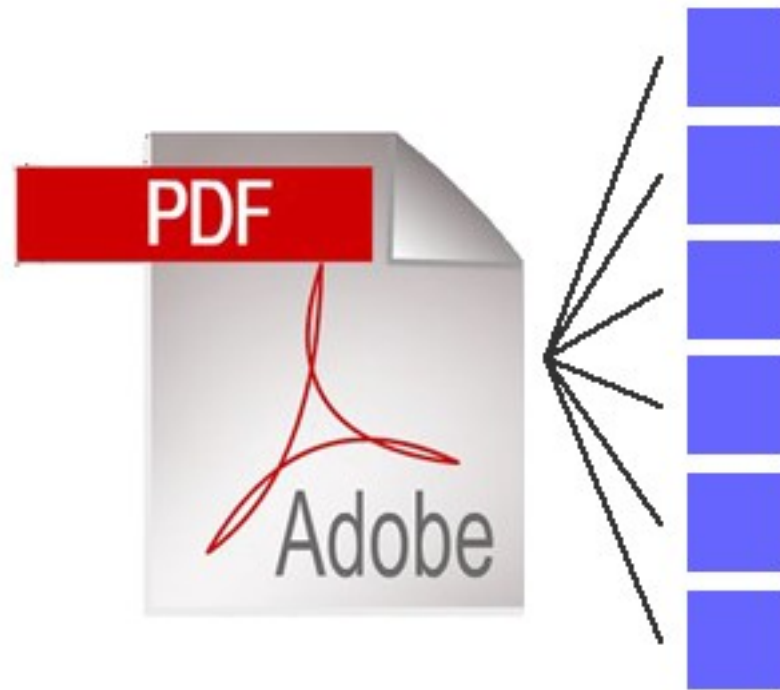
# Problem 5 – File Security

- Encryption / Decryption classes
  - Splitting files up in 1MB fragments
  - Cryptography in Actionscript
  - Possible algorithms – AES, DES, 3DES, BlowFish, XTEA, RC4

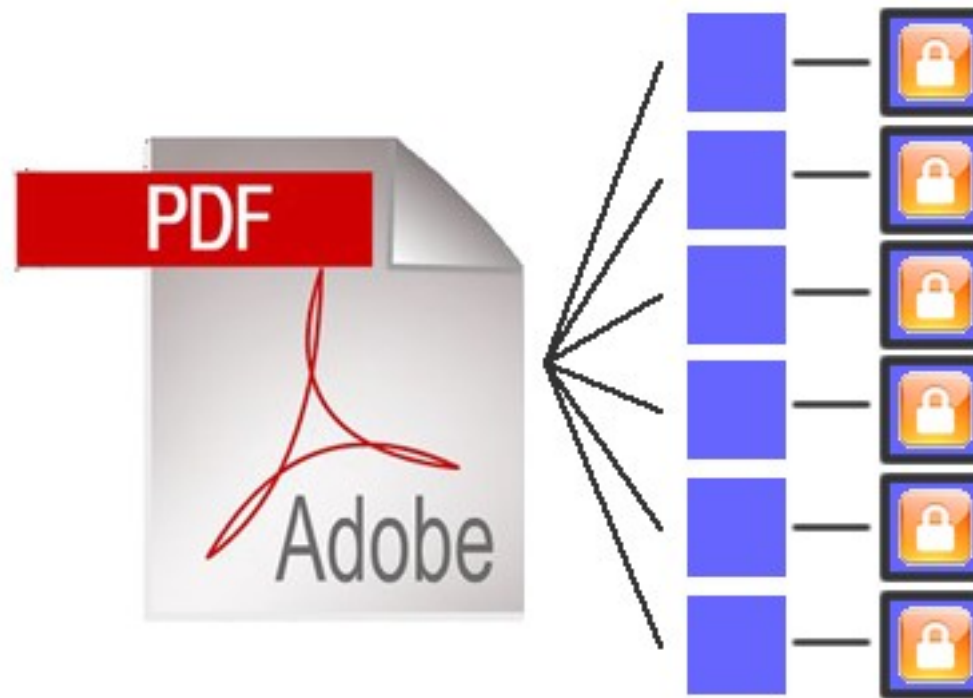
# Problem 5 – File Security



# Problem 5 – File Security



# Problem 5 – File Security



# Conclusion

- Thanks for coming!
- Notes, code and slides are at [codfusion.com](http://codfusion.com)
- Email: [mason \at\ fusionlink.com](mailto:mason@fusionlink.com)
- Twitter: [john\\_mason\\_](https://twitter.com/john_mason_)