

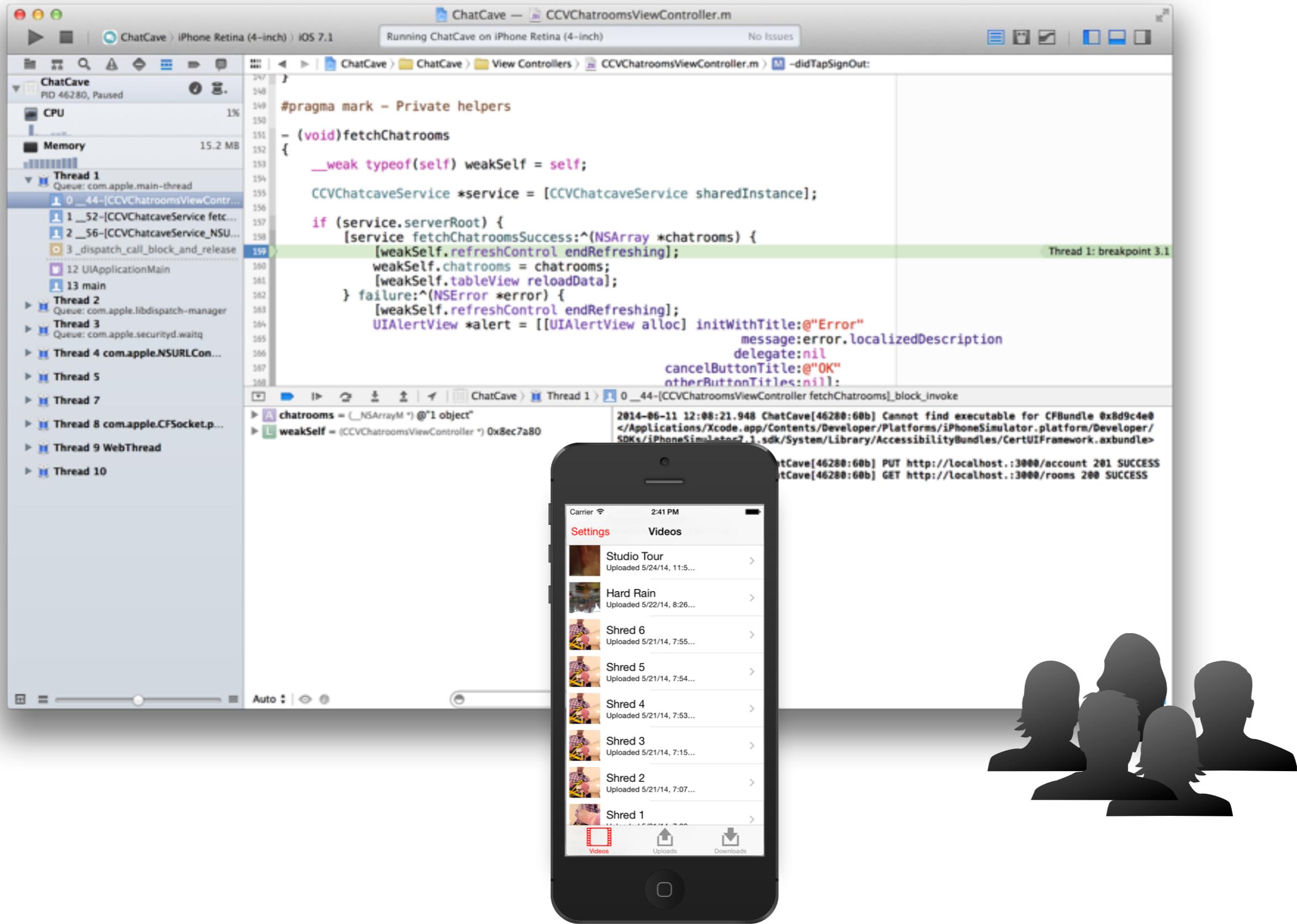
Wrapping Up

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pluralsight 
hardcore dev and IT training

Getting Perspective





Design Considerations



User experience is king

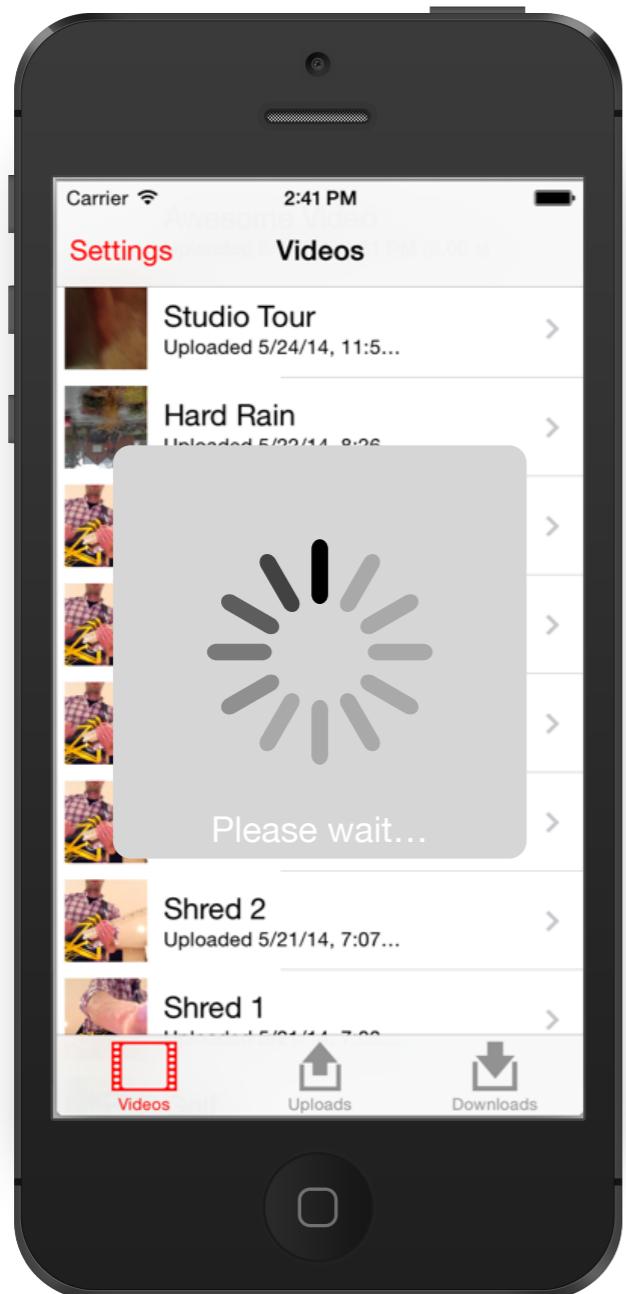
Drive design from UX

...not from network API

Conceal technical details

Be robust

Don't Block The User



Waiting is no fun

Avoid modal...

...or allow cancellation

Provide feedback

Avoid dependent requests

Timeouts & Retries

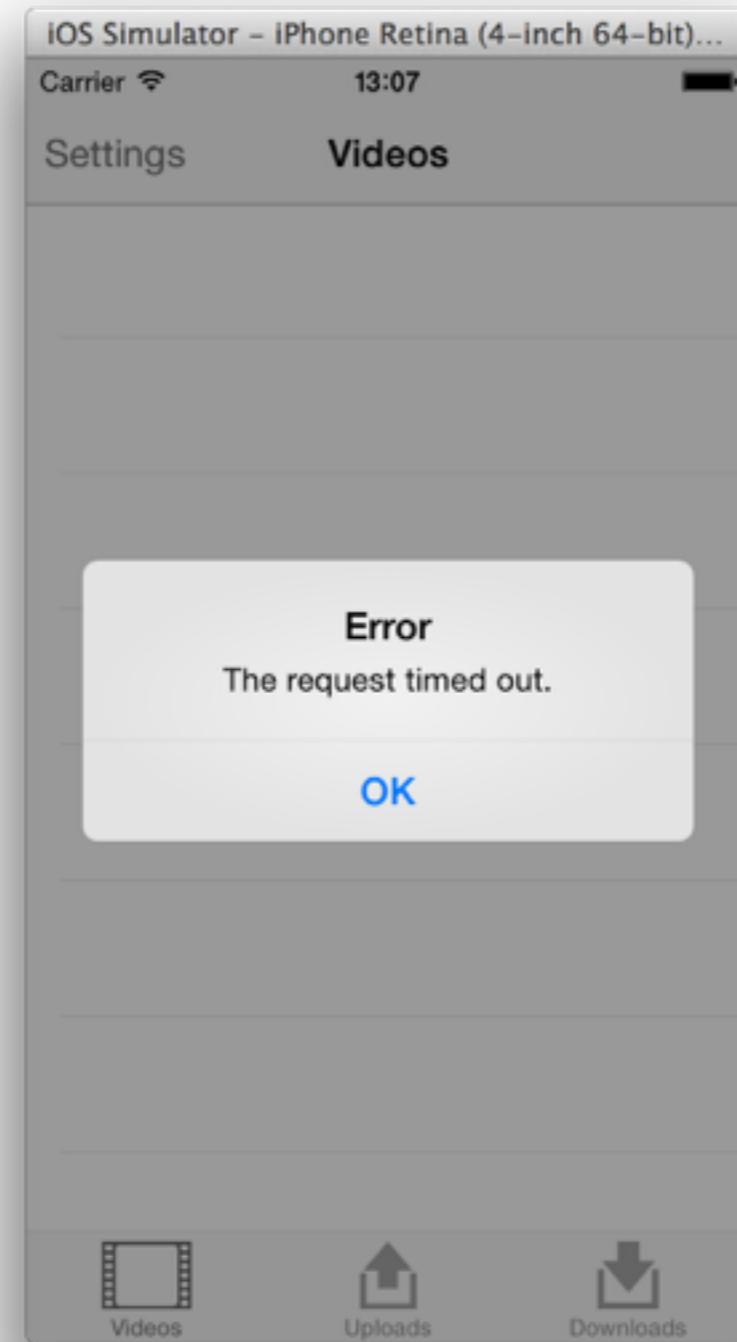
This is not a user-problem

Tune your timeout intervals

Automatically retry where possible

Message the user in-context

Provide feedback & ability to cancel



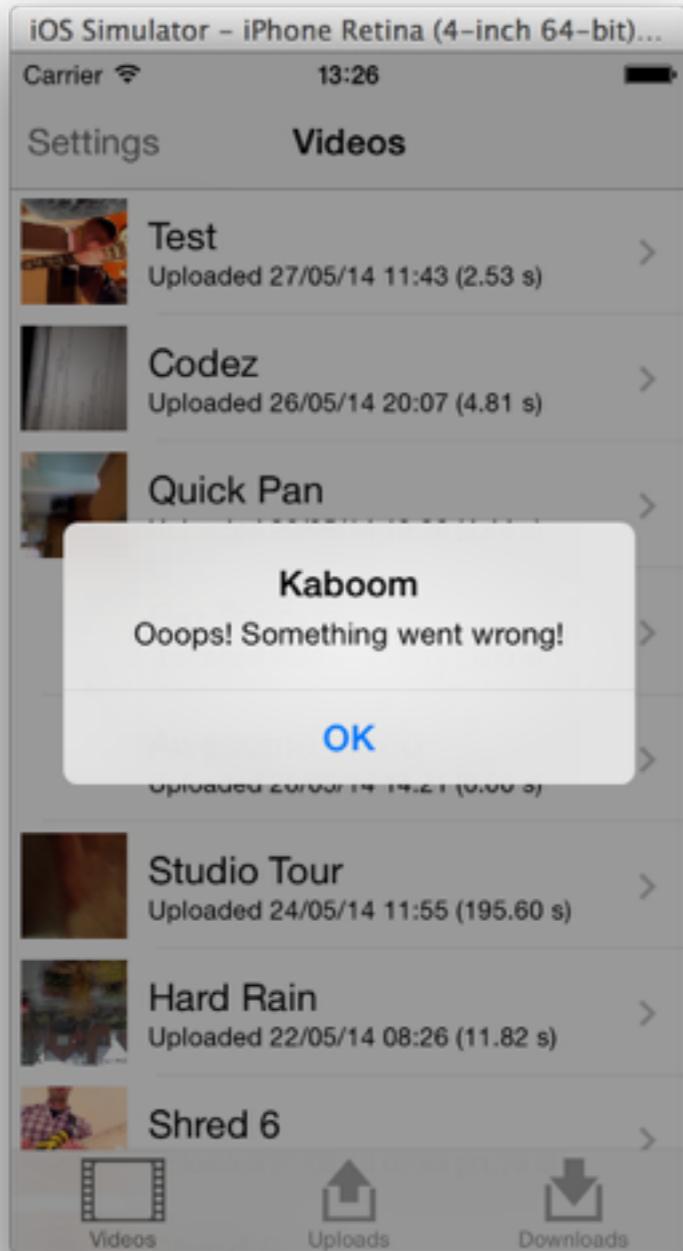
```
NSError *error = nil;  
if ([network doAwesomeThing:&error]) {  
    [self doAwesomeApplicationStuff];  
}  
else {  
    // TODO: now what?  
}
```

Error-Handling

Application
Logic

Error
Handling

Error Handling



Don't display every error

Partition errors:

Recoverable?

Fatal?

Temporal?

Consolidate error-handling

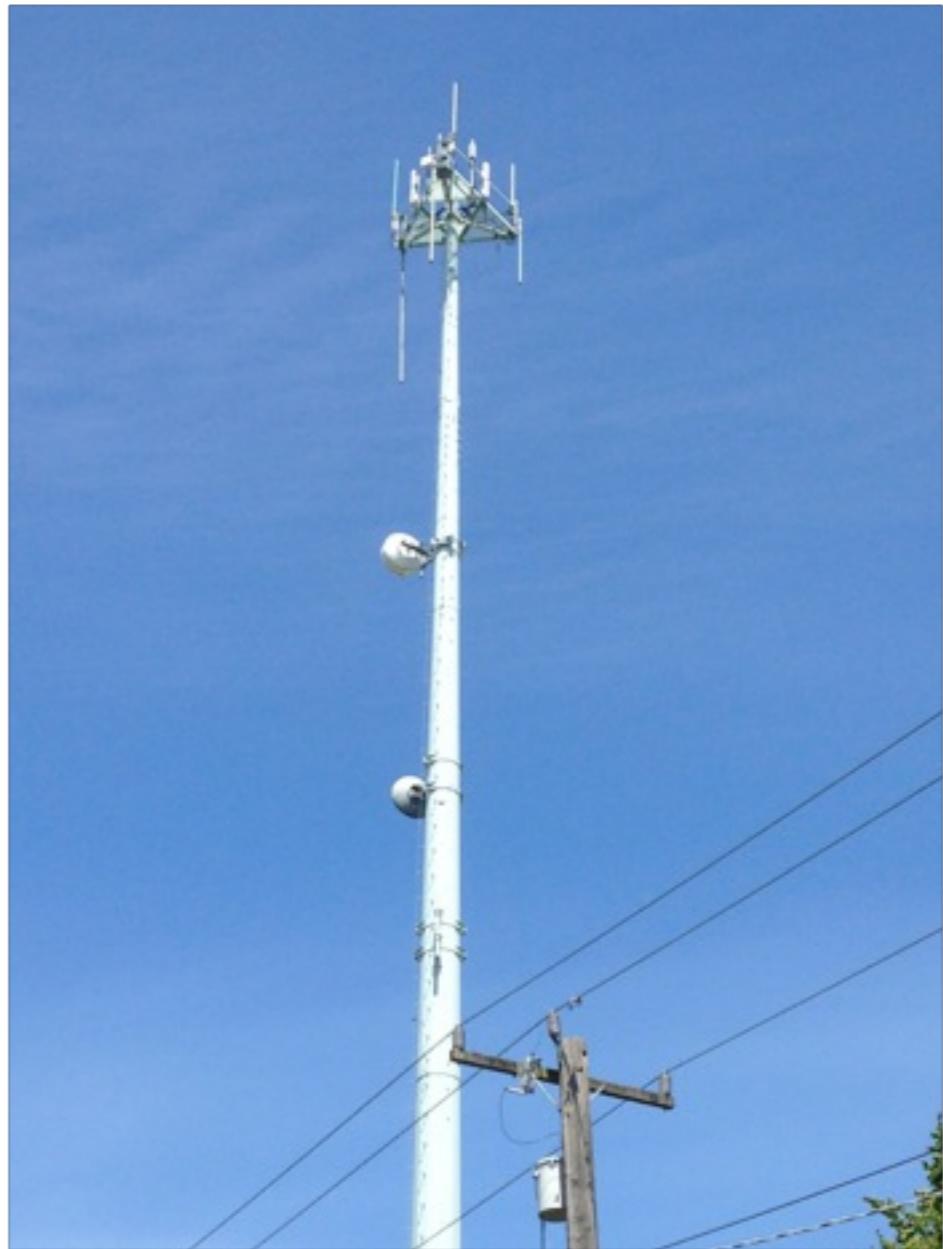
Reachability

Be aware of carrier connectivity

Don't abuse the data plan

Consider "offline" behavior

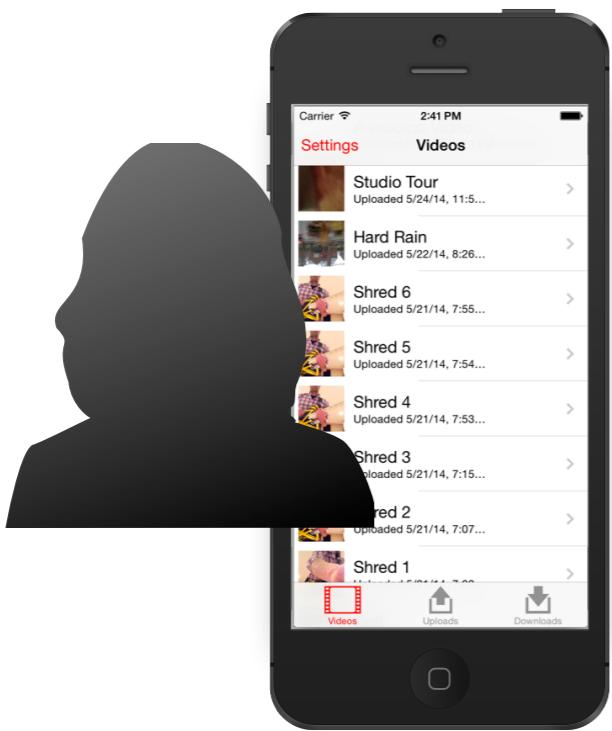
Be wise with power-hungry radios



Poor Conversational Skills



Defer Authentication



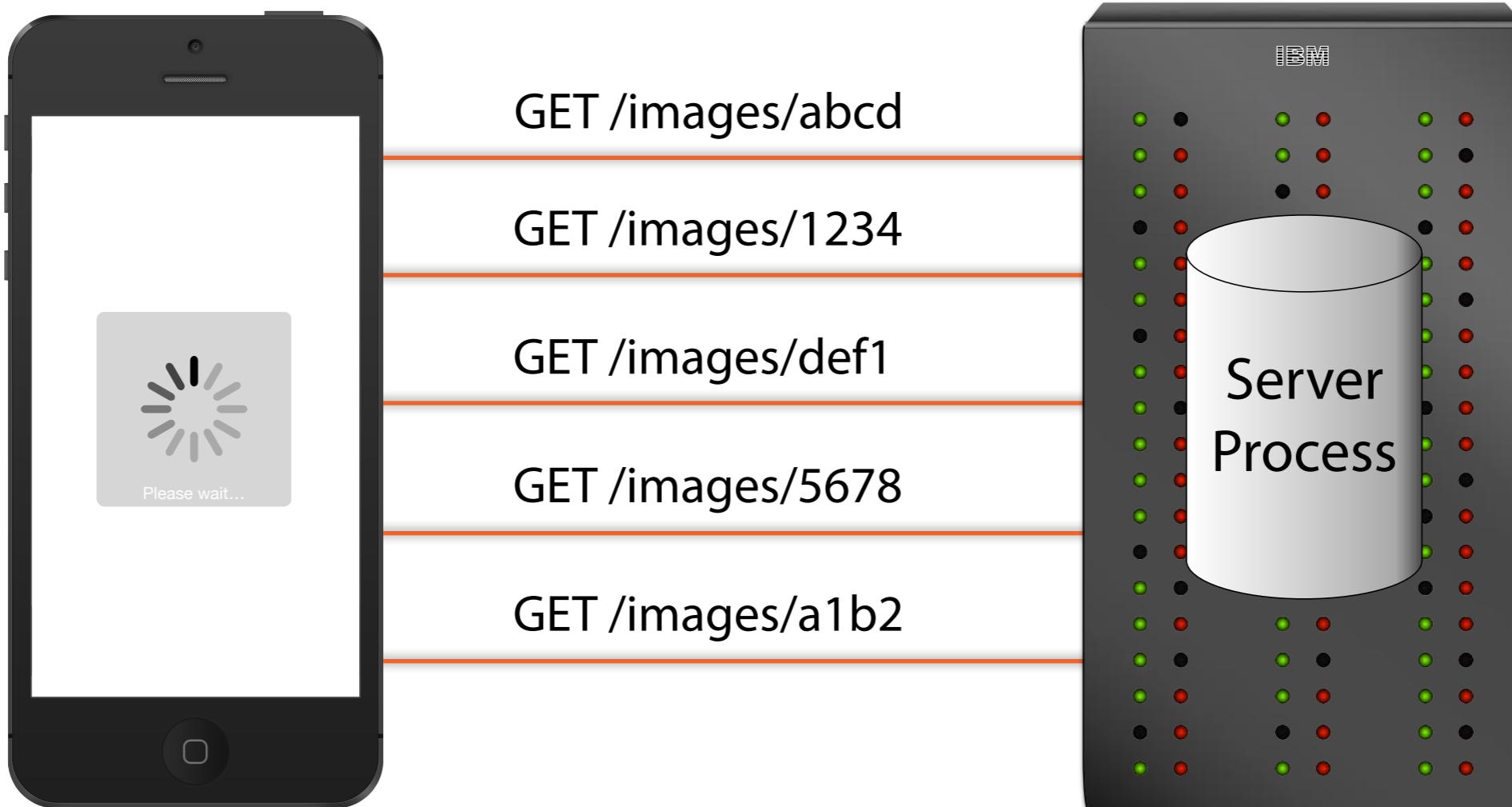
Avoid bad first experience

Provide previews

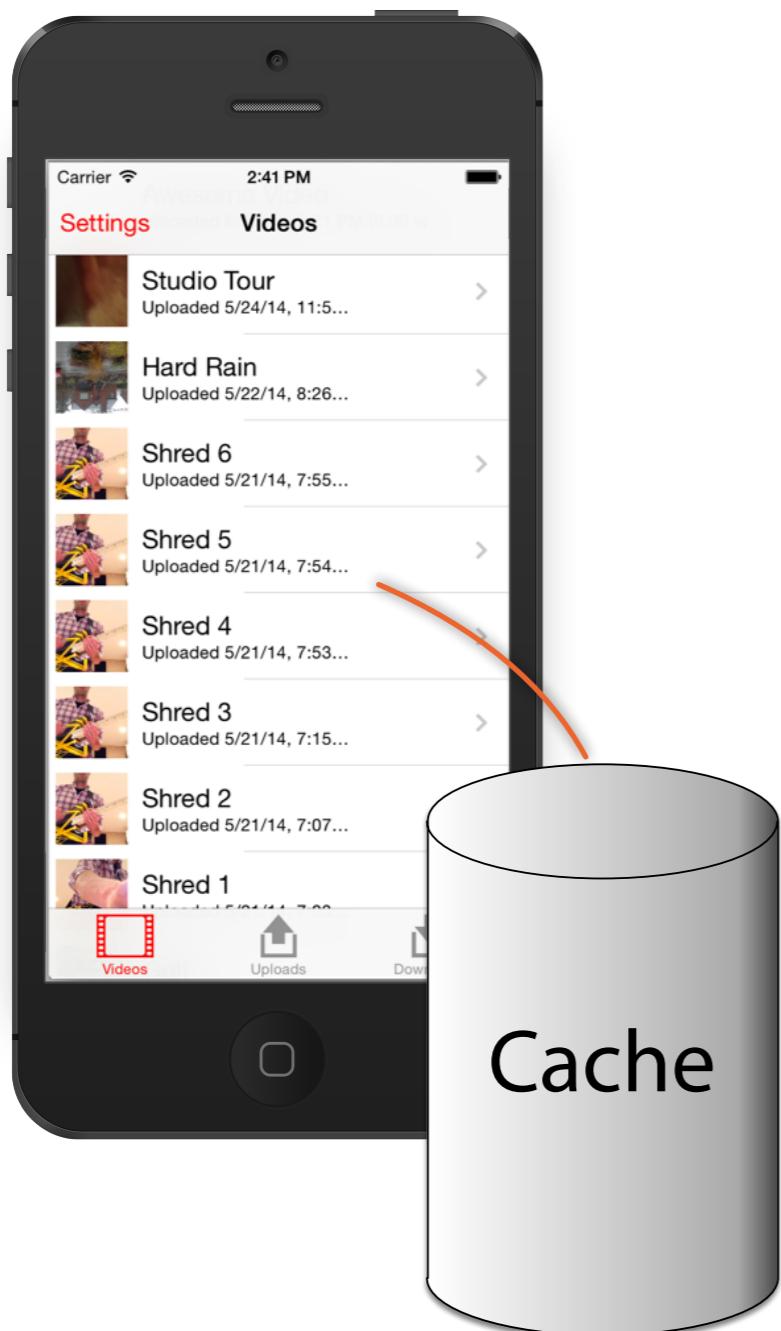
Optional experience

Consolidate code

Caching & Pre-Loading Assets



Caching



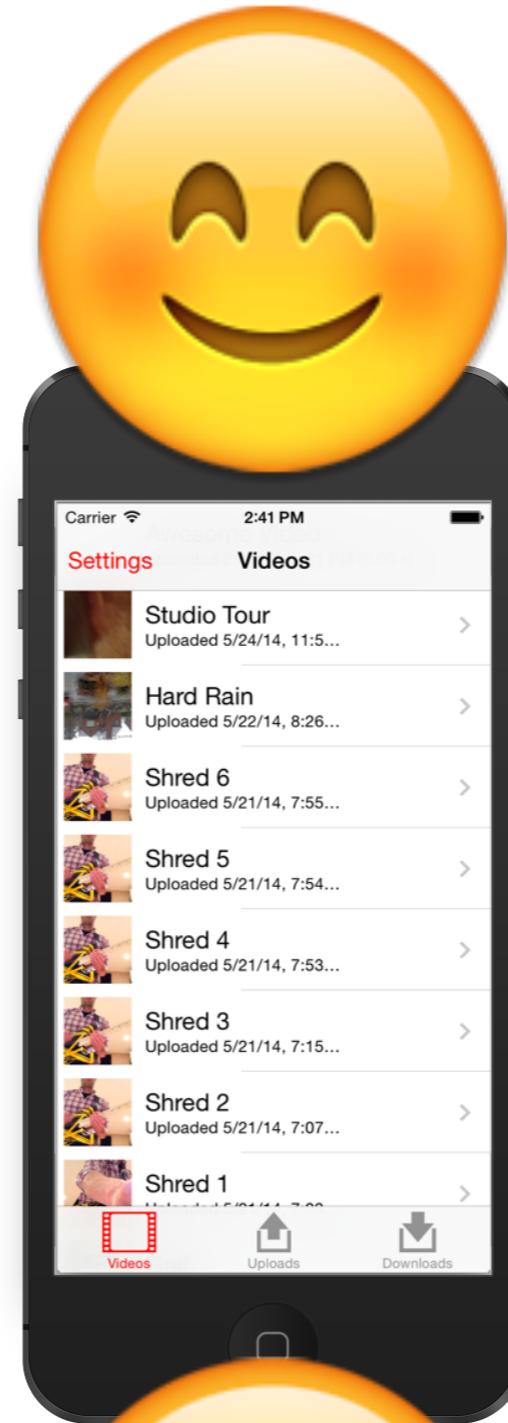
Disk > Network

Trade time for space

Use `NSCachesDirectory`

Use HTTP Caching

Works with pre-loading



A Connected World

Mobile apps are
connected apps

Most apps get their
information from
external sources

HTTP is the
protocol of choice

Golden Rules



The main thread is for the user

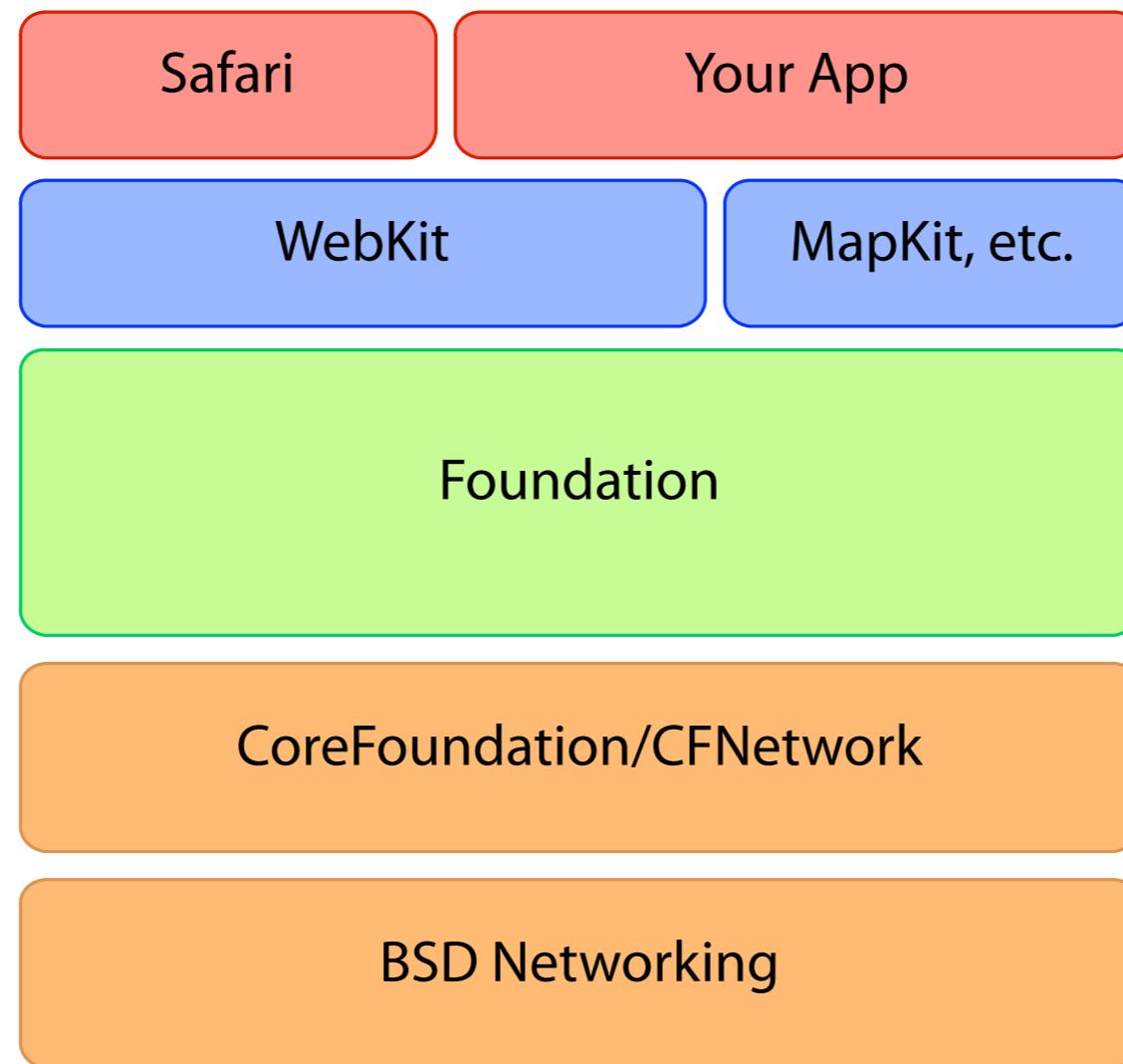
**UI can only be manipulated on
main thread**

**Networking must be
asynchronous**

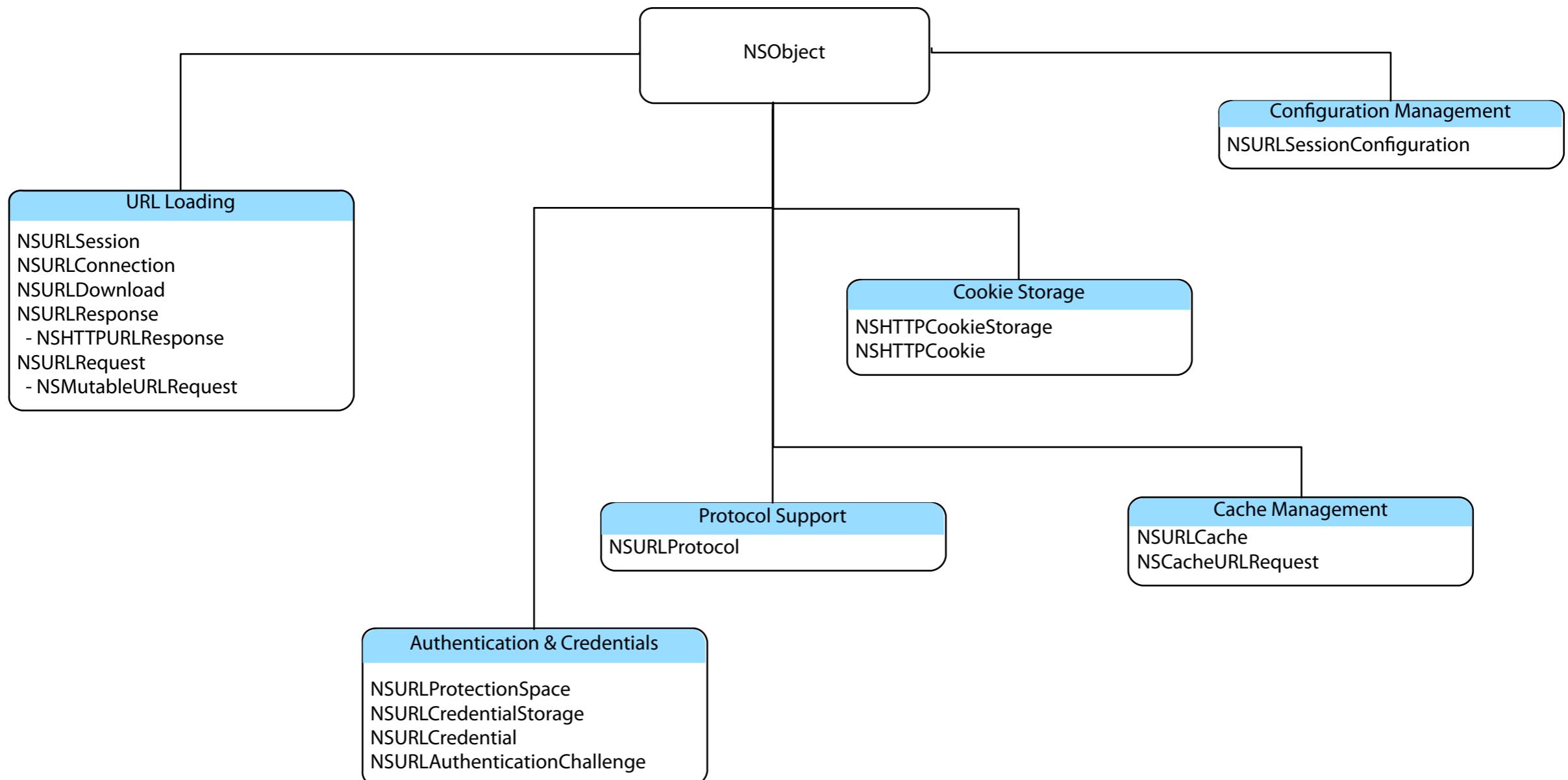
Do not directly create threads

Don't block the user

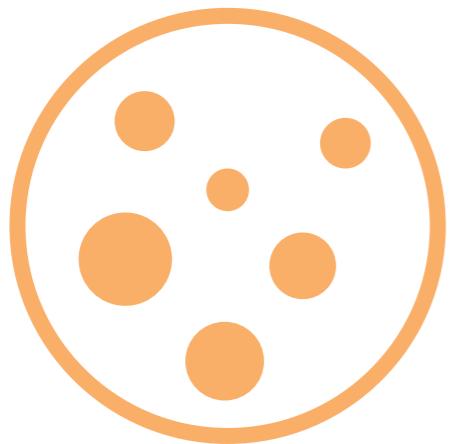
Foundation Networking



URL Loading System



Authentication Mechanisms



Cookies

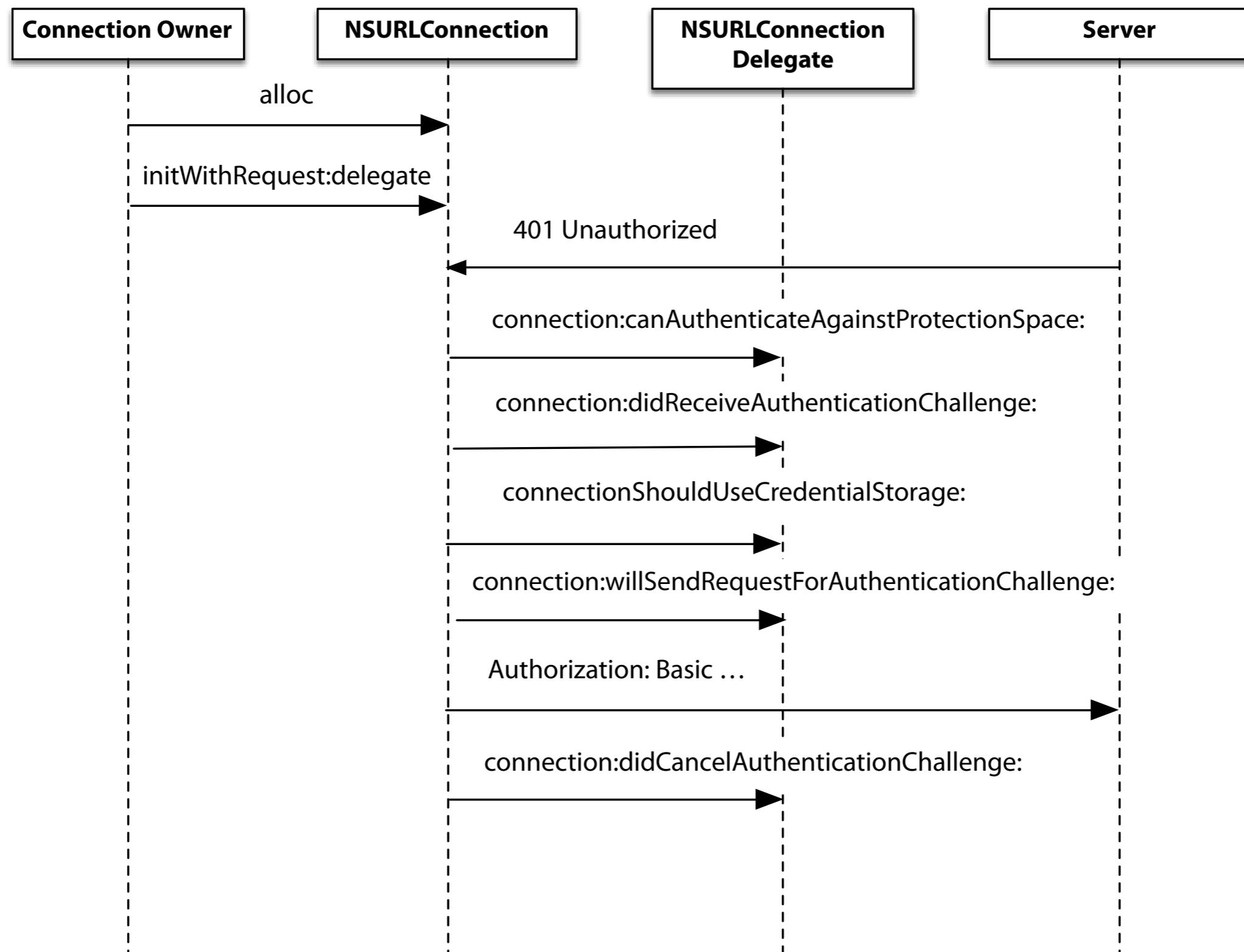


**HTTP
Authentication**

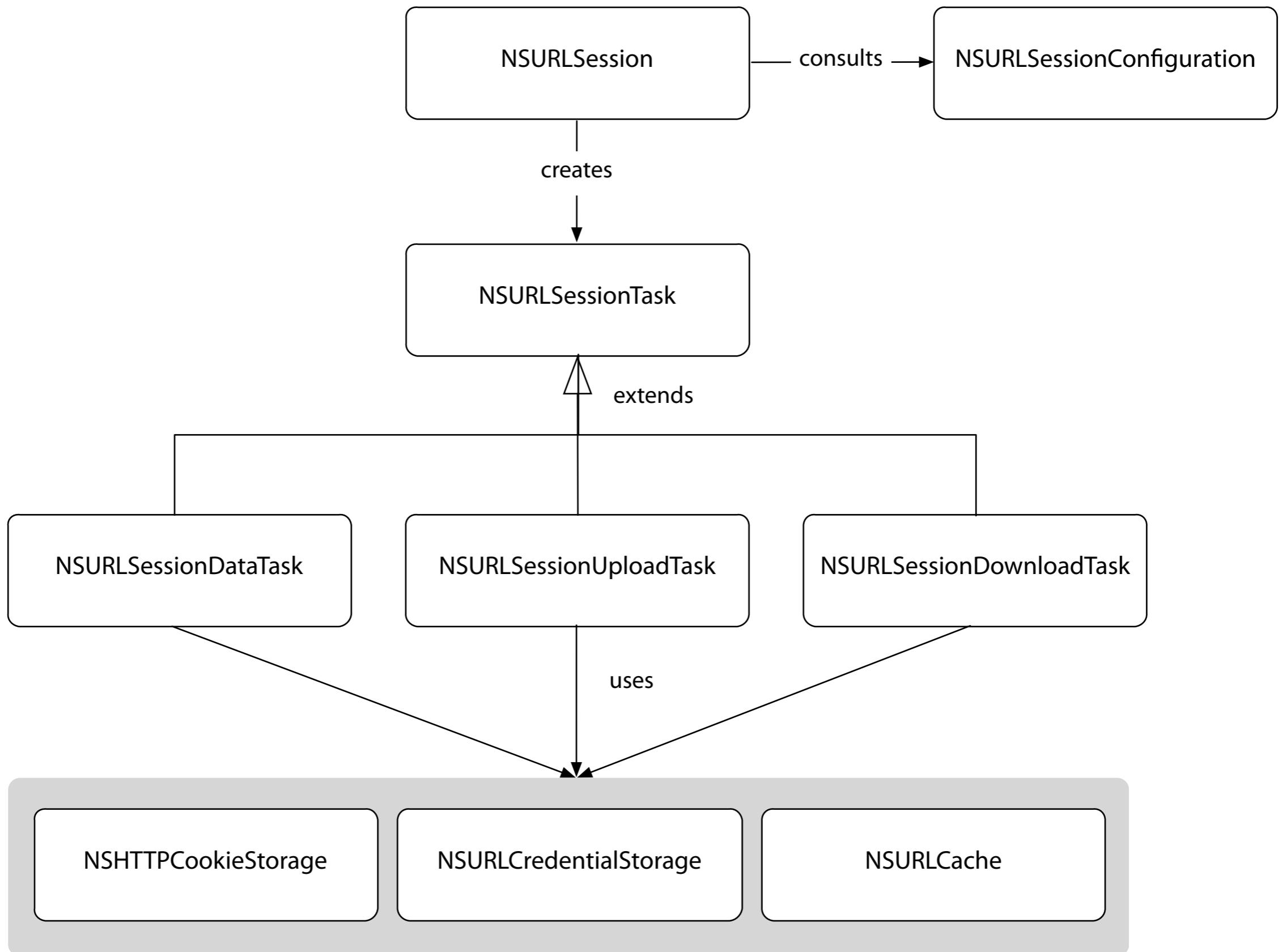


**Custom
Headers**

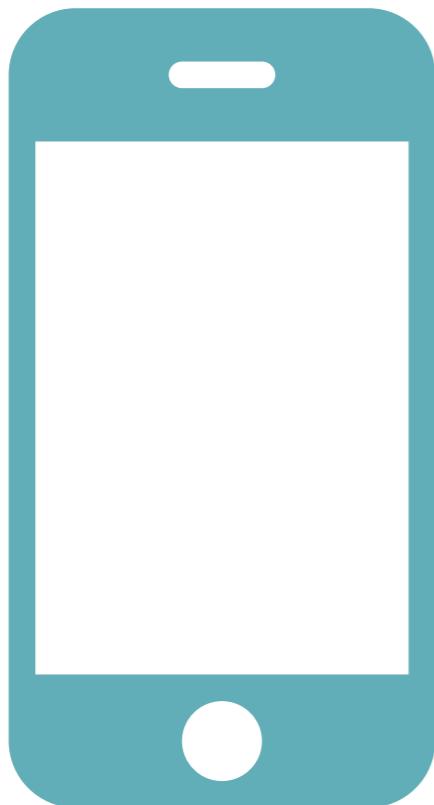
Responding to Authentication Challenges



NSURLSession



Background Usage



Use “background” session config

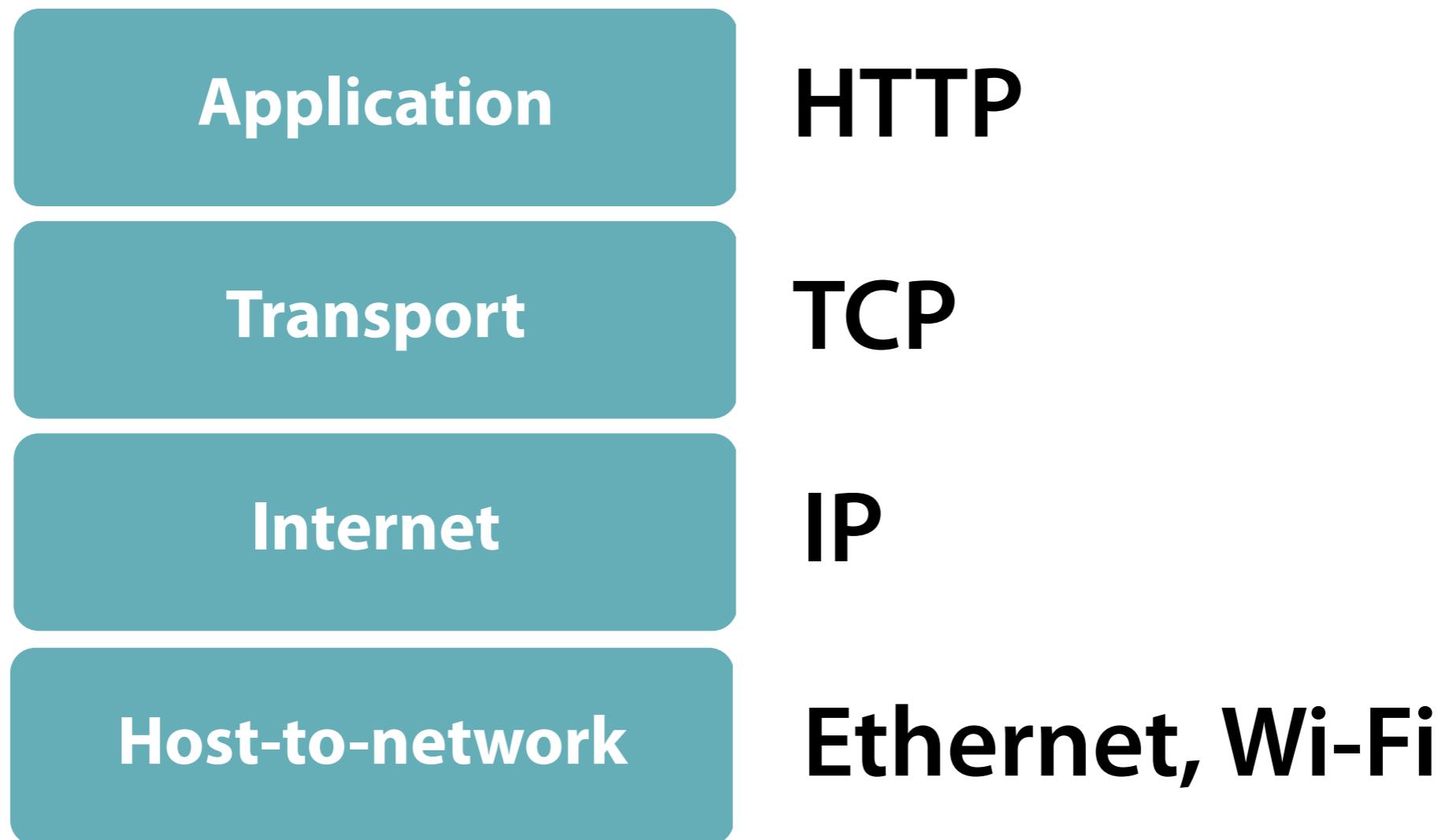
No async convenience

Must use delegate

Daemon does the work

App relaunched on event

The Network Stack





aend