

BEER

Block Extensible Exchange in Rebol

What is it?

- It is a framework to implement your own “Application Protocols”
- It solves the encapsulation, extensibility and flow control problems
- It was inspired by IETF RFC 3080 and 3081
- More importantly it allows for non-blocking user-interfaces

What problems does it solve ?

- Creation of new application protocols using the same infrastructure, e.g. SMTP, FTP, HTTP solve the same basic problem, but in different ways “The Wheel Reinvented”
- BEER brings the best of all under one hood.
 - Simple Framing
 - Robust flow control
 - Asynchrony

Mechanism	ESMTP	FTP	HTTP1.1	BEER
Framing	Stuffing	Blasting	Counting	Counting with a trailer
Encoding	822-style	Binary	MIME	Binary or Dialects
Reporting	3-digit	3-digit	3-digit	String
Asynchrony	Pipelining	None	Pipelining and Chunking	Channels
Authentication	SASL	user/pass	user/pass	Carl challenge
Privacy	SASL or TLS	None	TLS (that's SSL)	Rebol cloak
Extensibility	Some	None	Some	Profiles

What are Profiles ?

- They are your “Application Protocol”
 - You can use blocks or parse to define the syntax and semantics that each channel can use.
- Which Profiles are we shipping?
 - Channel management
 - FXP - File Transfer Profile
 - MSP - Message Services Profile (aka LNS)

TCP Session



Channel Exchange Types

- I:I MSG / RPY
- I:N MSG / ANS + NUL (N can be zero!)
- I:I MSG / ERR

Note:

- Channels are processed in parallel = asynchrony
- Exchange are processed serially = pipelining

Why do we need it ?

- We want to create many types of applications each with different problem domains:
 - New terms Initiator and Listener
 - Client-Server (Traditional approach)
 - P2P (anyone can initiate the requests)
- For example:
 - Network Monitoring Applications
 - Instant Messaging (think AltMe on Steroids)

What are we doing
with it ?

(Rasta Controller Demo)

What does it mean for the Rebol community ?

- BEER pushes Rebol limits => Rebol is more robust
 - Uncovered hidden features
 - Identified issues and requested fixes
 - Proposed enhancements
 - Recommending “Idioms”
- But more importantly BEER is free as in “free beer” starting today.

<http://www.whywire.net/share/beer-sdk.tar.gz>

Who built it ?



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