

Adobe

10/3/22

ColdFusion Summit 2022

Key note

- Mark Taketa - intro
- Shameer Ayyappan - light road map
- Mario - Web Author
- Urmil - Baswave
- Brian Sappay + Jim Ahne - Guerrilla RF

Performance + scale, Security, Productivity

Email/SMS/Phone using Twilio/Sendgrid

Chase Cabrera - iDonsite Pro

- Omnichannel Communication
- Email best practices
 - get permission
- SMS best practices
 - Opt in
- everything has a metric
- authenticate your domain
- cfx https
- private IP addresses

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From Monolith to SaaS - Discover the way

Andy Powell - Manager, Solutions Architecture
AWS SaaS Factory

andpow@
amazon.com

- micro services
- scale
- multi tenant
- full organizational changes - ~~is~~ a full business shift
- Software-as-a-service (SaaS) - low friction, service-centric approach
- Building relationships not just selling software
- Lots of cross-over between the architecture & the business model
- metering & billing
 - data isolation
- tenant isolation - they only see their own data
- Lift & shift, layered, service-by-service (just move it) (strategic layering) (keep breaking it down little by little)
- Onboarding & time to value
- build vs buy decisions
- building blocks & what do you want to do or use
- Tenant routing techniques
 - domain-driven routing - URL's
 - data-driven routing - tokens

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- Load balancer
- Once you have a layered model, you can stop there
- microservices + unique data stores
- Databases - read replicas
- making a plan - as a note, it will change over time - but it helps to have a plan - building change into the model
- technical debt - older code
- Are you locking yourself into something or are you able to change -
- Being able to mix + match multi-tenant + single-tenant modes
- when you building services, build them as multi-tenant
- moving from stored procedures into microservices
- consistent delivery of value
- Building all new features into microservices
- high availability
- building + deploying across multi-environments
- start each new feature with multi-tenant levels at the start, not as an after thought

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- Focus on SaaS building blocks first
 - Make identity and isolation
 - See photo on phone for some take aways
-

Common Software Weakness

Pete Freitag

get rid of
Evaluate() functions

- Code injection
 - be careful of Evaluate function
 - especially dynamics - unknowns
- Parsing XML
 - if you convert XML to JSON it tends to get rid of XML parsing hacks
- race condition - who is setting what variable
- file paths... make sure you already know what you are dealing with
- Read only access to files - don't let the server re-write your files
- Authentication and authorization - permissions
- make sure and lock what is needed - don't leave open back doors -
- protecting id's (FORM + URL)

especially in shared resource environments

Something.cfm?id=134

- I wonder what id=135 or 1111 or ?
- + even if the id is visible, make sure that the user has authority to view what they are looking at

10/3/22 (Continued)

- Hard coded credentials - be careful what you hardcode into the code
- Integer overflow or wrap around - say a big number & if it can't hold the next number, it rolls all the way back around to 0
- unrestricted upload - always check the file extensions
- Cross-site scripting
- the underlying Java engine is also weak for us - that is good -
- Input validation
- SQL injections - use cfquery params
- encode for HTML, JavaScript, & other stuff

AuthZ for me and you

Matt Gifford - DistroKid

- the authorization code flow
- SSO - single sign-on
- delegation framework
- Roles - resource owner, the client, resource server, authorization server
(the user) (the app) (API socket) (APZ server)

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- scope - grant types - access tokens - refresh token -
- state (token value) - passing things back & forth
- Lots of redirect URLs or URIs
- They keep changing it
- PKCE (pronounced Pixie)
- He, Matt, has built a number of tools that do the OAuth 2 stuff - git hub -

JWT (Jah + Jwah) - JSON web tokens
pronounced J-wah all together

~~github.com/coldfusion~~

- ~ Some of the other guys in the session were saying it took them 2 months to figure out SSO + OAuth 2 stuff - scary

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Future of Development - Adobe ColdFusion

Shameer Ayyapan + Mark Tikata

- what they are already doing
 - cfspreadsheet
 - cfimage
 - cfmap
 - cfgraph
- rest API's - making it easier
- making things easier
- moving more into Serverless
- following the AWS model of auto scaling up & down
- low code & no code frameworks
- report builder
- other Adobe products & making them integrated - even better
- educating the younger generation - middle school -
- creating a training pipeline
- re-invent ourselves from an educational angle

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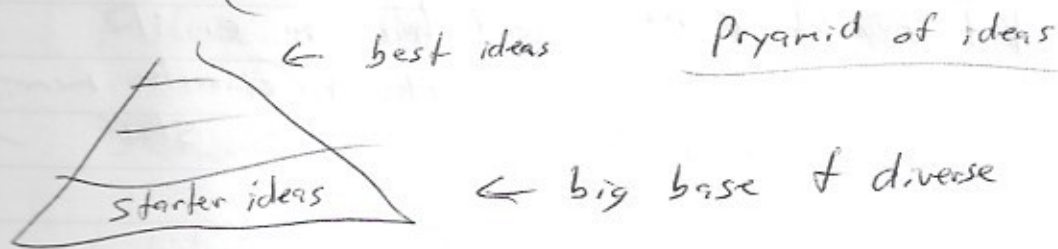
- takata@adobe.com - send him an email about Flash + (connection memory) stuff

10/4/22 Adobe ColdFusion Summit 2022 Day 2

Speaker Joel Cohen - writer

- writer from the Simpson's
- Solving problems
- using humor in the work place
- they use tons of guest speakers
- Creativity
- jokes ... setup + the punch line
 - ↑ expectations
 - ↑ twist
- Connecting to an emotional tether (connection)
- Brainstorming
- Benefits of bad ideas ... is it ok to bounce something off of the party based on that idea - building off of the bad ideas - seeds for the next idea or thought

10/4/22 (Continued)



- being creative is not efficient
- it's ok to go down the wrong path
- Going past our initial thoughts - keep digging & keep pushing
- flipping it on it's head - 180° ~~✗~~ - what would that look like?
- having a great idea & then having an even better idea of not using the great idea
- writer's block - they love to power ahead & finish & then go back & refine it
- who is the filter? what ideas pass the test?
- making it loveable
- prepare to be disappointed ...
- find a way to connect with people & bringing joy
- comfort food - consistent - same things every time
- Creative environment - see photo of a slide - some good ideas

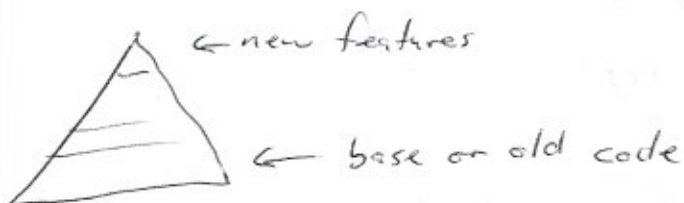
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Modernizing through evolution not revolution

Guust Nieuwenhuis

- goal tuning
- 10 year average for software lifetime
- New things keep coming up & playing through
- spaghetti code, outdated framework, unsupported libraries, deprecated integrations, no tests, not documented, difficult to develop, hard to maintain
- what's next
- cat chasing the mouse
 - adding functionality to the "old" engine - see photo on my phone
 - the full rewrite ended up in a financial disaster
- it is easier to write code than it is to read code
- a feeling isn't sufficient, rewrite delays the release of the project, more bugs and less functionality, expensive, no guaranteed success



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- settings to show/hide features - keep pushing out new things & use permissions & settings to show/hide & make the new things conditional
- small changes to microservices
- 1. make a case for what you are doing or wanting to do
- 2. set a boundary for what you are going to do - be careful how many things each thing touches
- 3. Next you need a plan or a strategy
- Getting a quick ROI (return on investment)
- building new functionality by taking on new practices & new plans -
- use the same (older) database
- if you build new, make sure that you can criss-cross between old & new - users, logins, permissions, settings, sessions, etc.
- Anticorruption layer (ACL)
- little by little, make the new stuff
- maybe use event queues
 - a substitution to triggers
- same habits, same mistakes!
- (MVP) minimum viable product, plan, person, etc.

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- making a plan and consolidating - due to a business case
-

Mining electronic documents for fun and profit

Raymond Camden

- PDF's are easy to store, easy to read, & easy to share
- Data is safe, but "hidden" in documents
- "information" or "data"
- text, styling information, tables, images
- Adobe Document Services - API's - Adobe tools for PDF's
- if you need document services, look into Adobe Document Services
- PDF Extract - what you do with that data
- Once you get the data... then what - that all depends - the data gets pulled into a huge JSON object -
- saving human effort
- treating a PDF ^{as a mini database} + extracting data to a usable format
- machine learning, AI artificial intelligence

10/4/22 (Continued)

The 7 mistakes Developers make starting Their First Business (and how to avoid them)

Emma Fletcher

- Natural to ^{make} mistakes. - mistakes are ok
- We love to build things & create things
- more than one idea
- Learning what you like to do & what you don't like to do
- 1. Fear of failure
 - you will fail and that is okay
 - Waiting for the "perfect" idea - it won't ever come
 - just needs "one more feature" - failure to launch - get it out the door
 - Committing to a launch date - tell others
- 2. Shiny Object Syndrome
 - Always looking for the latest & greatest framework
 - Your customer's don't care what you use to build a product
 - Lost time and energy on something that doesn't fully work
- 3. Overengineering
 - preparing for a million users
 - Building everything from scratch
 - Focus on the bare minimum, it is okay if it is clunky
 - Consider using simple or manual tasks
 - You don't have to automate right from the start

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4. "Going Viral"

- The product is so awesome it will sell itself (it won't)
- Consider more sustainable marketing plans
 - Just get started
 - Slow & organic growth

5. Building More Features

- If I only build X my viral launch would have worked
- Feature request page - public - what do they want?
- Who is going to pay for it?
- Selling the value of what you are saving your customer

6. Building for yourself/Developers

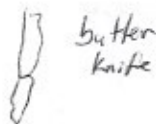
- Developers love to build their own tools
- often very specific use cases
- how broad is this tool? who needs it? Are they going to pay for it?
- Developers all have opinions

7. Burning Out

- balance with work, business, family can be difficult
- ask for help or find ways to hire help
- Taking care of yourself is taking care of your business



what startup
founders think
customers want



what customers
actually want

- we love to solve problems

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- pod casts - startups for the rest of us - Rob Walling

- Books

The Embedded Entrepreneur
by Arvid Kahl

The Mom Test
by Rob Fitzpatrick



What would your mom say
& would she actually
use it?

- What is the value of your service?

- Don't be afraid of competitors in the space -

Opportunities for blockchain technology and NFT's in the real world

Masha Edelen

Nick Juntilla

- NFT's - Non-Fungible Tokens - fungible means interchangeable

- blockchain - distributed ledger ^{Technology (DLT's)} - transactions - immutable

- in general - token technology - unable to fake or duplicate things
- a level of authenticity

- full history of an item

- Web 3.0 (Web3) - third generation

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- Smart Contract - the code controls the execution, and transactions are trackable and irreversible
 - authenticity of certain things
-

Serverless Beyond Simple

Brian Klass

- cfzip - small example dealing with size + scale
 - can you handle it? can your servers handle it?
- zip files, pdf files, csv files, ETL (extract, transform, load process)
- predictions + forecasting services
AWS
 - Expertise, infrastructure, scale
- Offloading + running things Asynchronous
- does it have to be done, right this second
- Queues
- Serverless - functions as a service
- Serverless workflows
- think outside your current environment stack

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- running serverless out on AWS - cost, flexibility, new tech
- the value of your team over time
- patterns that work
- ColdFusion is the controller
 - split & share responsibility
 - Logic & main DB locally
 - Async work offloaded to the cloud
- strategies - permissions & gating
 - outside services don't need to know your app permissions
 - just do the tasks
 - Give your service a packet that tells it what it needs to do
 - dumb promotes reuse
- Store big assets & then point to them
 - for example - send a JSON file or CSV file, store & save it
 - then send a call & point to the bigger data asset
- Messaging Queues vs direct calls
- Don't overwhelm downstream services - super common problem
- Capacity - keep watching downstream

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- SQS vs SNS - ColdFusion has some great queue services
- Dead Letter Queues (DLQ's) - to catch failed messages
- Step functions workflow
- All non-code files need to go into something like S3 buckets (AWS stuff)
- Don't use your CF servers to upload files
 - let S3 do this work for you
 - use presigned PUTs
 - don't bog down your CF work
 - use JavaScript or something else to push the files
- CF servers performs authorization - Let other tools do the uploads
- Orchestration workflows
- Don't chain functions together - monoliths in the cloud
 - step it & use the queues -
 - how do you go back up the chain
 - use step functions
- There are tons of pre-built functions - check it out before building your own
- in step functions - long execution time, branching logic, parallel processing, simple error handling, simple retries, data manipulations, wait for user scenarios, visualization of each execution

10/4/22 (Continued)

- visual maps of the logic
- Keeping track of data coming in and data going out
- ASL - Amazon State Language
- Debugging serverless states & apps can be painful
- Avoid redundant work
 - check the queues - don't overspend
 - check for duplicates
- state management
 - store state locally for ColdFusion calls to AWS
 - ~~store state~~
- at some point, you need to know when things are done & completed
 - checking completion - wrap things up
- Learning is important
- explore, & go do it!
- brian.klaas@gmail.com
- maybe think of having multiple accounts
 - limit the blast radius