

# AKA.FREEWHEEL

INTRODUCING FREEWHEEL INTERNAL URL SHORTEN SERVICE

**FREEWHEEL**  
A COMCAST COMPANY

SEPTEMBER 7, 2022

# AGENDA

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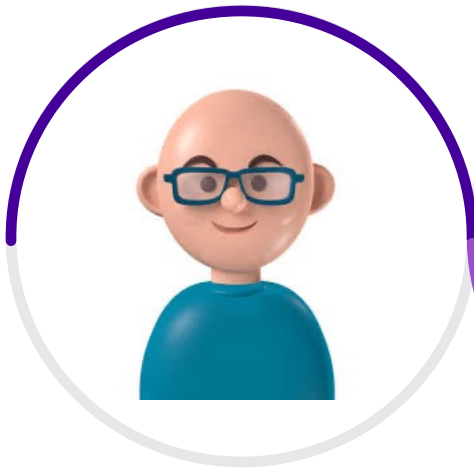
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# TEAM INTRO

# ONE STRATA BEIJING TEAM



**JAMES WANG**

Sr. Manager



**YUAN LIN**

Lead SDE



**CHENGSI ZHANG**

Sr. SDE



**YUE ZONG**

Sr.SDE



**A NEW HIRE (OR  
TBH..)**

God.Lady

- **Sorted by hair ASC ...** (Transcript: Sometimes you need to calm down when you are getting promoted, which basically implies you gonna have less hair)
- **Why chengsi, yue, junwei looks same? Because as Sr. Devs, we are good at COPY & PASTE.**
- **Plus male devs' appearance doesn't matter ... That's why we have a real picture for our lady!**

# CONTEXT

# TINY URL

YES, ITS CORRECT!

- Everyone knows Tiny Url, which is the first course in “System Design 101”
- But does it secure?

# TINY URL (Cont'd)

YES, ITS CORRECT! BUT WE DO NOT WANT TO USE IT!

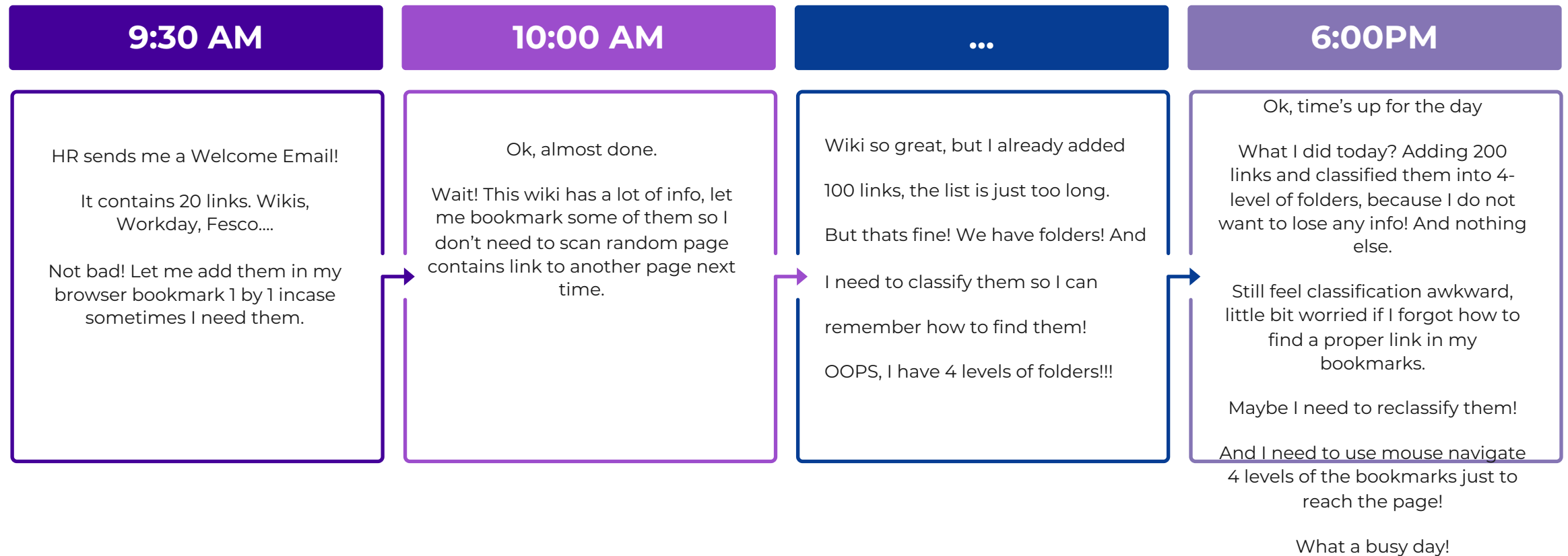
- Nowadays people tends to design their Entity Id using GUID instead of auto-increment number, or at least combine these two approaches.
- Why? Because auto-increment numbers are **GUESSABLE**. If we only expose GUID in URL, so bad guy cannot guess it and hack it!
- So, URLs may expose some holes for bad guy.
- **NOW, let's imagine all your company's URLs are stored in a 3rd party tool.**
- Even it's not a big deal in-terms of security, however, its simple, so why not? (Transcript: create our own tool and keep our URLs safe)

# BROWSER BOOKMARKS VS AKA.FREEWHEEL



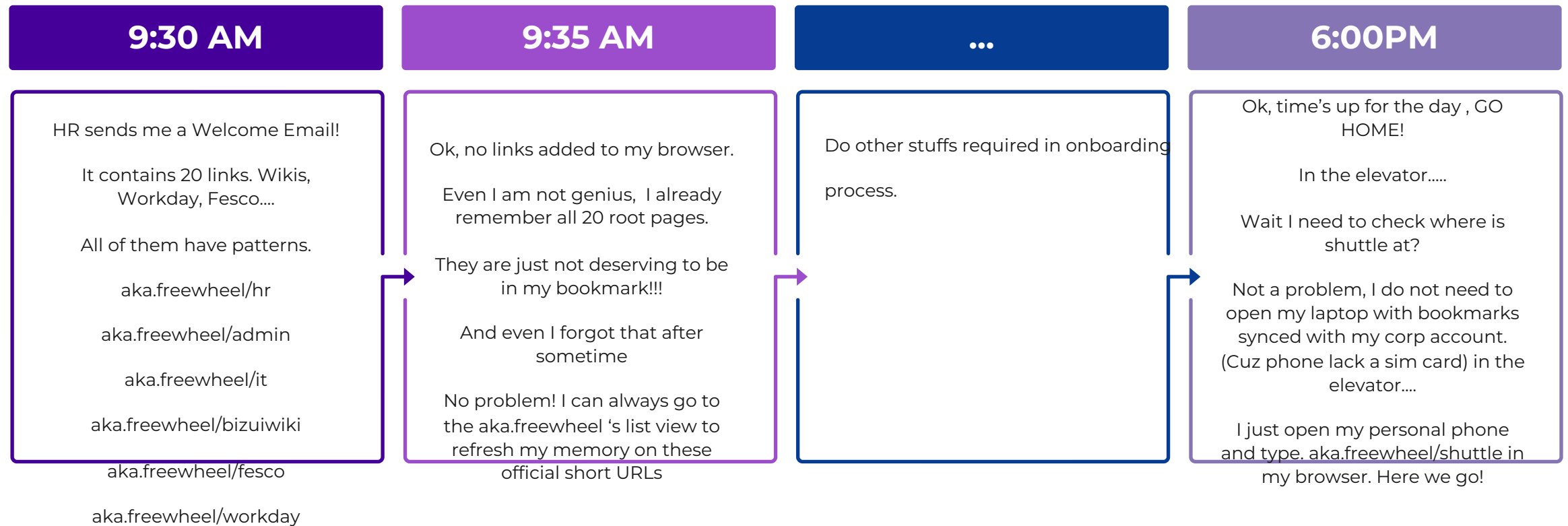
# STORY 1:

NEW HIRE :ONBOARDING (NOTE BELOW TEXT ARE TRANSCRIPTS, WE WANT COMICS!! NO TEXT)



# STORY 1 (CONT'D)

NEW HIRE ONBOARDING, BUT WITH AKA.FREEWHEEL!



# STORY 2 – ? (CONSTRUCTING...)

2. Biz UI team's operation dashboard → aka.freewheel/bizuiops,  
Biz UI team's jira tasks => aka.freewheel/bizuijira  
My PRs -> aka.freewheel/jwhuprs  
My open tasks search query .....freewheel.tv/jira?isclosed=false&assignedto=xxxx-xxx-xxx& ..... => aka.freewheel/jwhutasks  
BizUi PPE environment => aka.freewheel/bizuippe

3. My machine screwed up, need to use colleagues'  
My machine got a virus that screw up all my bookmarks...IT'S REAL!!!  
My machine screwed by my 1-year-old daughter..  
Reset up a new machine...  
No worries, I always remember aka.freewheel! and even aka.freewheel/vpnwiki

4. What do I eat today while I am on bus.... aka.freewheel/lunchmenu

5. Internal communication. Writing wiki, email, Edit Link..  
(I wish I have a hit counter program that counts how many times I right click, click "Edit Link", and Type Name).  
Instead, use (aka.freewheel/{your\_text\_planned\_to\_add\_in\_edit\_link}), and say goodbye to edit link button!

6. External customer also easy to remember our sites link, custom queries  
Even they don't bookmark, does not matter that much, cuz they can infer it.

Hopefully, it implicitly increase Page Views and Customer Experience.

(Make this an internal framework and integrated to as a feature of a portal, or just have a public endpoint)

# PRODUCT DEMO

# TECH DESIGN

# CHALLENGES

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# CHALLENGES

- How to host an internal webapp and not expose to internet
  - How to create a 'aka.freewheel.com' with DNS only accessible with in Corp network (So that we do not need work to do authorize user when Redirecting).
  - What is the process at freewheel to create it?
- Reduce dups like many shortUrls to 1 target Urls
- Check short URL unique is resource-taken but we can have a background worker role to pre-generate some.

More to copy from system design book 😊

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# FUTURE

➤ Maybe `aka.freewheel/mysecrets/devloginaccount/{some_pwd}` to store some secrets that not expose to external but help people remember them!



# SUMMARY



### **short**

- = simple
- = easy to remember
- = store more information in "brain" database while having a decent query performance for everyone
- = improve work efficiently across company
- = bigger revenue



# Q & A

# THANK YOU

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A COMCAST COMPANY