

November, 2016 OSBA Capital Conference 2016

The magic routing button

Fantasy vs. Reality
Exploring the keys to success in school bus routing software


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OSBA leads the way to educational excellence by serving Ohio's public school board members and the diverse districts they represent through superior service, unwavering advocacy and creative solutions.

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Routing Software: Key Topics Today



- What will it do, and NOT do?
- How does it work?
- Benefits – how will it help?
- Evaluating the marketplace
- Best practices for implementing software
- Q & A

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What **will** it do?

- Be a powerful tool for staff
- Save staff time on several levels
- Help ensure student safety
- Improve communication among staff
- Provide tools to help communicate with families

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What **will** it do?

- Help the district assess possible changes for efficiency
- Provide *measurable* results
- Establishes documentation

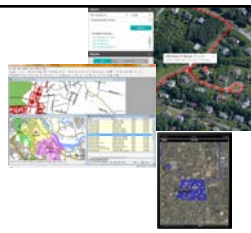
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Software Tools...

Software can help with...

- Route design
- Safety Review
- Field Trip request/approval
- GPS Analysis
- Look up access for all staff
- Better preparation for the first day of school



ALL software has a foundation – it is vital to understand this

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What will it NOT do?

- Replace a human being
- Build all of your routes for you
- Magically 'optimize' your routes
- Eliminate the need for communication

Fantasy vs Reality

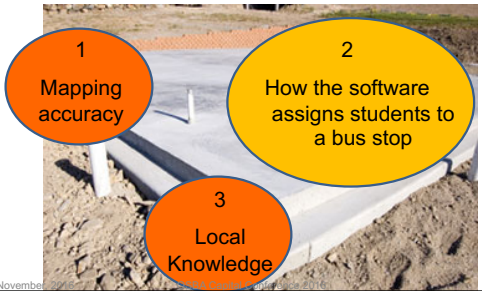
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How does it work? Foundations...



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Three Core Foundations...



1 Mapping accuracy

2 How the software assigns students to a bus stop

3 Local Knowledge

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Three Core Foundations...



1 Mapping accuracy

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Digital Maps are not all equal



Have you ever had a map locate an address in the wrong spot?

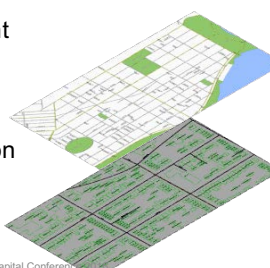
What if this happens for your students?

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Mapping accuracy affects...

- School assignment
- Eligibility status
- Every time & distance calculation

• Safety

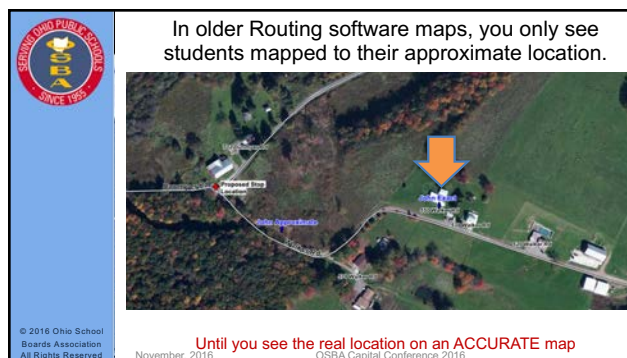
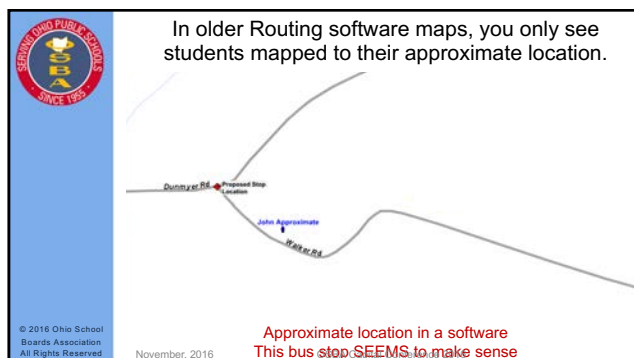
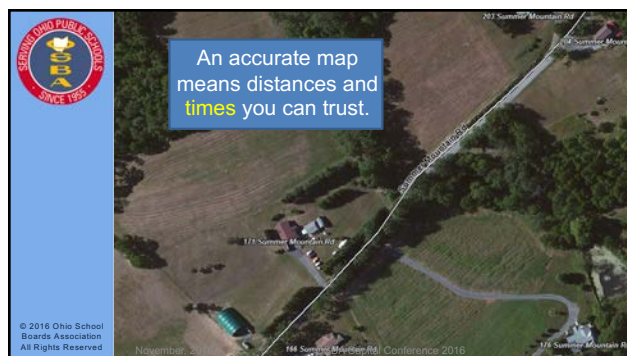
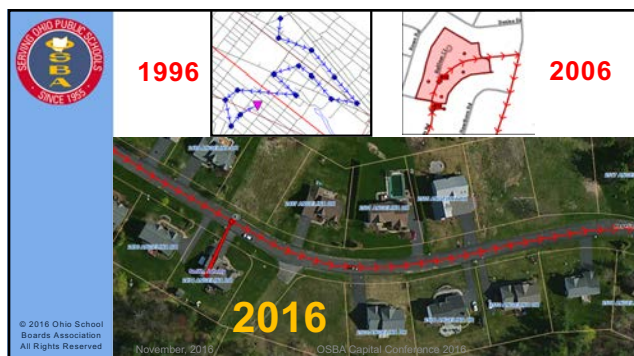
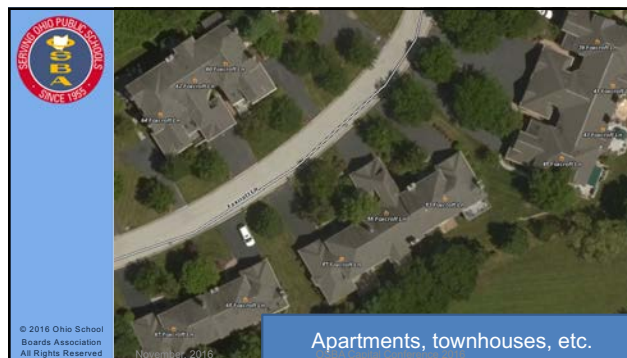



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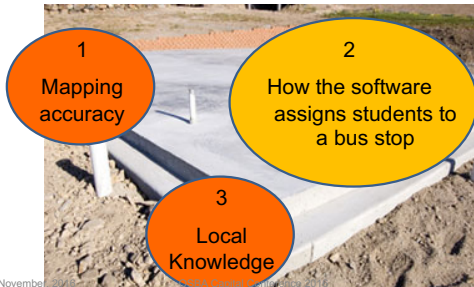
Exact mapping comes from the local county GIS office. (911 or Auditor)

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Three Core Foundations...



1
Mapping
accuracy

2
How the software
assigns students to
a bus stop

3
Local
Knowledge

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Three Core Foundations...



2
How the software
assigns students to
a bus stop

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Ohio Department of Education

Ohio Pupil Transportation Operation and Safety Rules

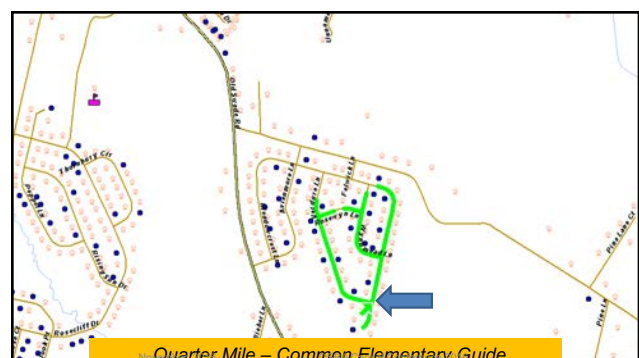
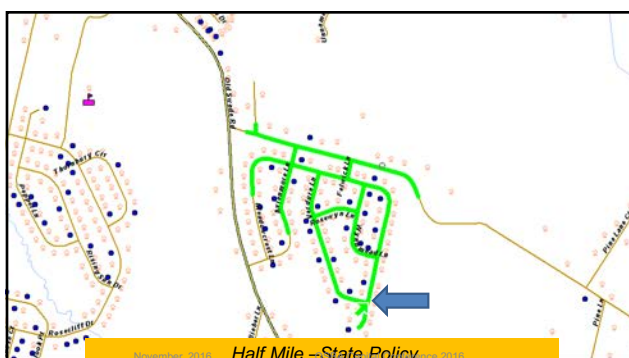
ADMINISTRATORS TEACHERS PARENTS COMMUNITY TOPICS HOW DO IT? ABOUT MEDIA CONTACT

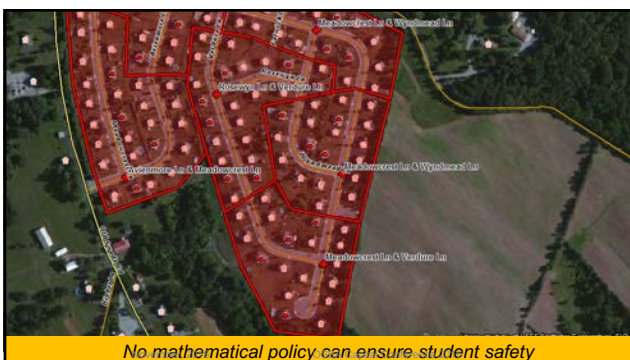
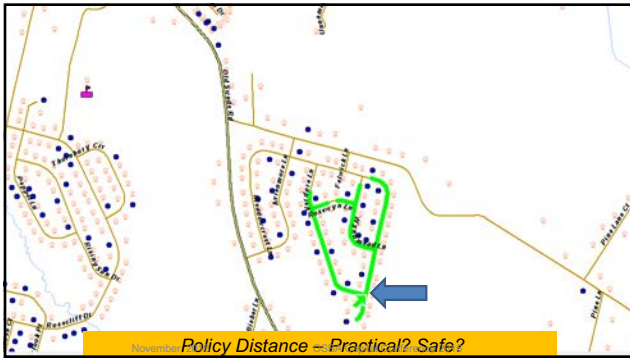
(B) School bus stop location

- (1) Pupils in grades kindergarten through eight may be required to walk up to one-half mile to a designated bus stop.
- (2) School bus stop locations shall provide for the maximum safety of pupils giving consideration to distance from residence, traffic volume, physical characteristics, visibility and weather conditions.
- (3) School bus stops shall be established on the residence side of all

.5 mile walk to a stop?

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Three Core Foundations...

1 Mapping accuracy

2 How the software assigns students to a bus stop

3 Local Knowledge

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Three Core Foundations...

3 Local Knowledge

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Local Knowledge

- Routers that know the area will know things computers don't understand:
 - Traffic
 - Walking areas
 - Crossing zones
 - Hazardous areas
 - Local Tradition: "We've always done it this way"

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Local Knowledge

- You still need a person to plan, the question is: What tools do they have?

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Big Picture Benefits

- Safe foundations to consider changes
- Explore what you MIGHT do as a district, with measureable results

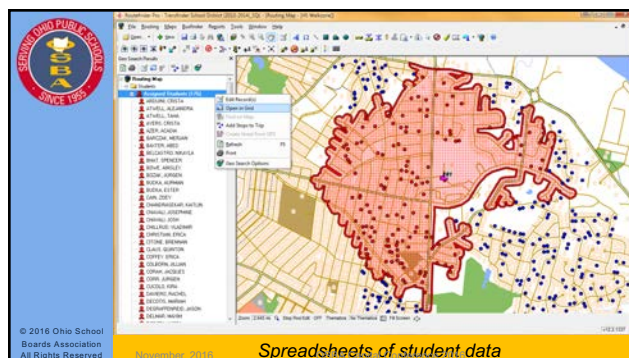
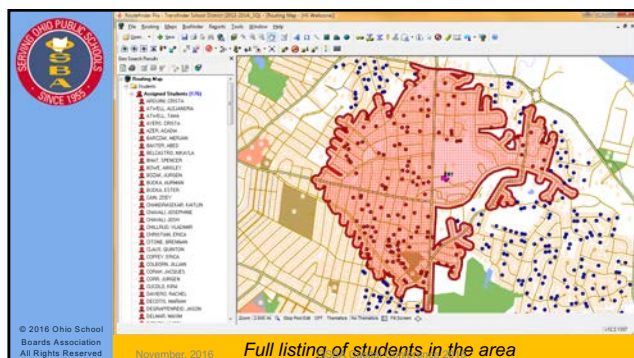
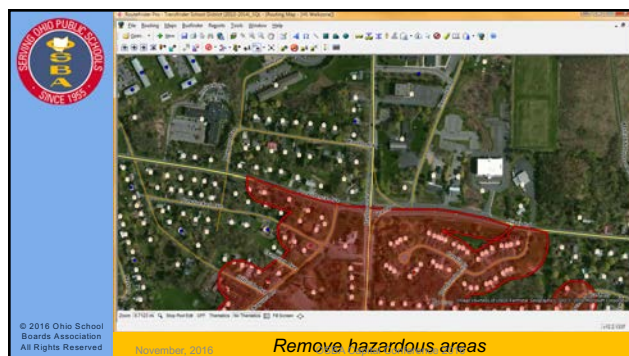
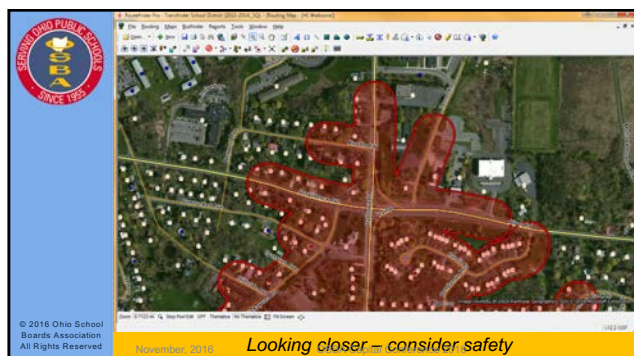
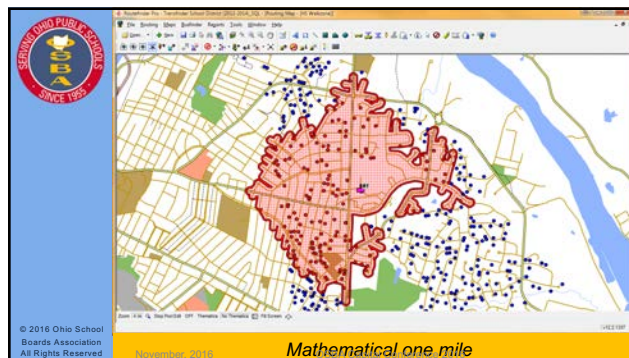
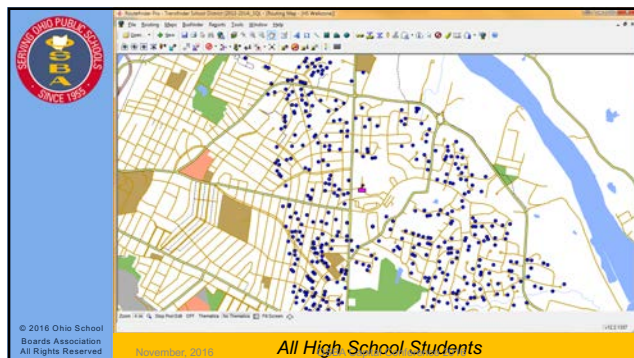
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Cost Savings Tools

Helping with:

- Eligibility Evaluation
- Driving Path changes to reduce miles
- Stop Consolidation
- Moving Stop Locations
- Stop Sequence Optimization
- Eliminating Route Overlap
- Route Reduction by Tracking Actual Ridership
- Comparing Actual vs Planned routes with GPS

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Post Cards
Letters
Emails
Phone Calls
Texts

From a map, to a spreadsheet, to communication.

Post Cards
Letters
Emails
Phone Calls
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Value of Stop Consolidation
Risk with making exceptions

30 stops – 1 hour 15 minutes – 21.6 miles

Post Cards
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Texts

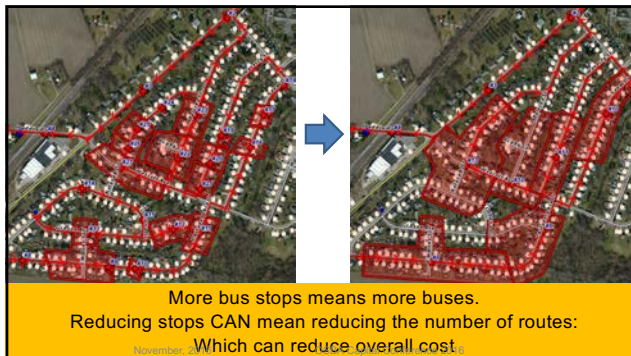
Value of Stop Consolidation
Risk with making exceptions

16 stops – 1 hour 5 minutes – 19.5 miles

Post Cards
Letters
Emails
Phone Calls
Texts

Value of Stop Consolidation
Risk with making exceptions

Saved 14 stops
Reduced route time by 10 minutes
That 10 minutes may be exactly what you need to adjust school times



Evaluating the marketplace

- There are a variety of providers
- No 'one size fits all'
- More about fit, than 'best'
- The right package supplements local knowledge

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General Software Sales...

Does the sales pitch match reality?

Think about the Sales Rep...

- Expertise?
- Knowledge of the software?
- Providing Realistic expectations?

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Routing Software Sales...

- "Its Easy"
- "Optimize your routes"
- "One Touch Routing"
- "We can find savings for you"

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Routing Software Sales...


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Critical concerns...


- Where students cross
- Hazardous Areas
- Sidewalk status
- Safe turnaround locations
- Line of sight
- Predators/Offenders
- Special Needs / IEPs
- Vehicle equipment
- Family Disputes
- And more...

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In the past 20 years...

- Over 200 districts in Ohio purchased a software system, and then stopped using that software.
- Boards are expecting more, they want evidence before investing.




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Best Practices...

- Ask any vendor you are considering to map your students in their software.
- Transportation staff can review this for accuracy.
- Ask the vendor what that data review tells them about your project and your timeline.




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Initial data review tells...

- State Route 7 = US Route 20 = Smith Rd
- Missing roads on the map
- Student Data quality
- Most importantly:
Initial Project Timeline



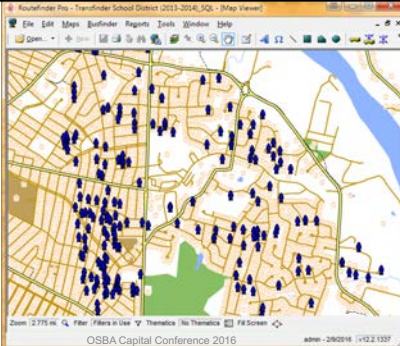
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This should be done QUICKLY
Days, not weeks.




Initial Data Review

45% of students on the map



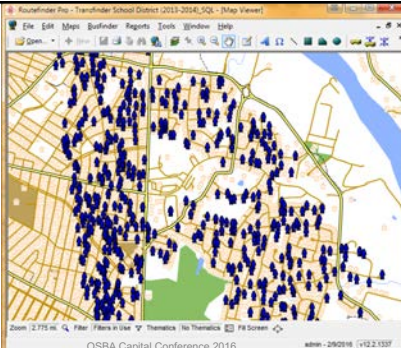
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Initial Data Review

95% of students on the map

KNOW BEFORE YOU BUY



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DON'T TELL ME
SHOW ME

Sales Pitch

vs

Reality

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Software Implementation Timing

- Most districts implement any new software over the course of 5-10 months.
- NOT something to start in May/June.

2016/17 School Calendar

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The new reality implementation changes in Transportation

- Careful planning is key
- The right tools are essential
- It simply cannot be rushed anymore
- You really only get one chance
- Problems can't always be handled quietly

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Developing local talent

- Software is an asset to the local person, it is a tool.
- Districts need to make sure that somebody local is comfortable using the tools in the software.
- It is always good to ensure more than one person is able to use the system.

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Ongoing feeding

- Continued training access
 - Online videos/access
 - Calls, training sessions

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Ongoing feeding

- Understanding how to continually import data from the student system
 - If transportation data is isolated, it will always be out of date.

Student Information System → Nightly → [Map]

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When is the right time to make routing changes?

- Not right after purchasing software.
 - Staff must be very comfortable and competent in using the tool
- Routing changes should be implemented when convenient for the district, and not disruptive.

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When do you start building next year's routes?

- NOT July (or August)
- More time is good, always

2016/17 School Calendar

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What do you need to build routes successfully?

- Good student data
- Early enrollment of new students
- Accurate mapping
- Competence in the routing software
- Access to software support
 - Better support from vendor, and more attention, in Spring rather than Summer

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Beware the 'magic button'

If it looks too easy...

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Thank You!

Discussion / Q & A

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