

Leveraging Commercial Technologies

17 November 2010

Graphics Based Service Information for
Translation Reduction



Agenda

- Background
- A Concept
- Documentation Example
- Benefits
- A Limitation
- Standards Development
- Issues Remaining



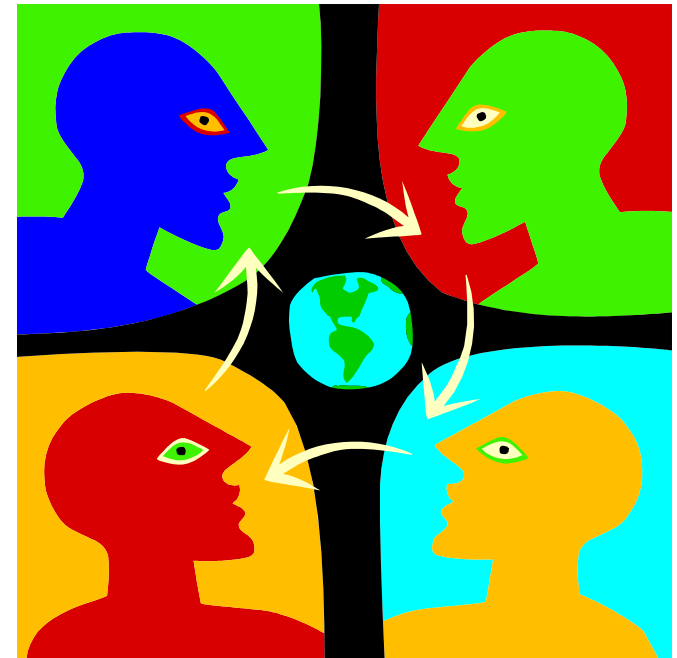
Background

Translation

- Millions spent on translation per year

Translation Avoidance

- Preferred Verbs
- Standard Technical English
- Writing Spelling/Style-checker
- Translation Edits
- Translation memory



Concept Description



Pictures are universal!

"A good sketch is better than a long speech." – Napoleon Bonaparte

1927's "Ancient" Chinese Proverb

PRINTERS' INK Mar. 10, 1927 Mar. 10, 1927 PRINTERS' INK

ROYAL BAKING POWDER ABSOLUTELY PURE

ROYAL BAKING POWDER

NO ALUM

Avoid Substitutes

"Make a Cake for Bobby"

—that's what this car card said *every day* to many millions of women. It reminded all mothers *every day* of a sure way to give a treat to their own children. And hundreds of thousands got an extra thrill with their next cake making because of the happy expression of the boy on the car card.

The moral of this story is that the same influence could not be created even with the same picture in any other advertising medium.

H. Barnard
National Advertising Manager.

STREET RAILWAYS ADVERTISING CO.

Fred R. Barnard

ILLUSTRATION™ Documentation

Final Drives

Assembling the Final Drives

1. Press in bearing cup (A).

Taper roller bearing cup—Force at insertion..... min. 45 kN
min. 10000 lb



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2. Insert wear ring (B).

3. Install sealing ring (B).

4. Press in bearing cup (A).

Specification
Taper roller bearing cup—Force at insertion..... min. 45 kN
min. 10000 lb



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5. Bring rear axle in vertical position.

IMPORTANT: Before assembling and adjusting final drives, rear axle must be bolted to corresponding rear wheel of tractor to a matching wheel rim.

- a. Use at least two bolts to attach flanged axle to wheel rim.
- b. Clamp rack-and-pinion axle securely to wheel rim.



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Flanged axle

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Rack-and-pinion axle

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TM8006 (01OCT06) 56-25-8 Premium tractors 6230 to 6630 01/08 P11-642

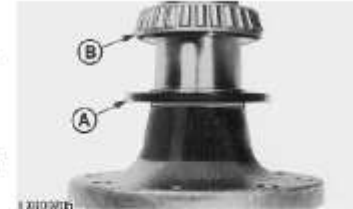
Final Drives

CAUTION: Plan a safe handling procedure to avoid burns. Do not heat oil above 150°C (300°F) as otherwise oil or oil fumes can ignite.

NOTE: Before installing, heat taper roller bearing cone (B) to 120°C (250°F).

5. With metal side first, slide new seal ring (A) onto flanged axle. Remember to include taper roller bearing cone (B).

Specification
Taper roller bearing cone—Force at insertion..... min. 50 kN
min. 11000 lb



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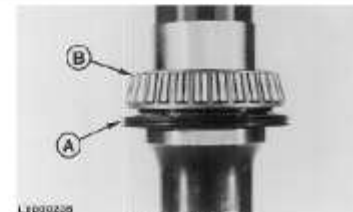
Flanged axle

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NOTE: On tractors with rack-and-pinion axle, install seal ring (A) together with bearing cone (B). Apply a force of 50 kN (11000 lb).

7. Coat sealing lips with John Deere EP multipurpose grease.



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Rack-and-pinion axle

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NOTE: Before installing, heat taper roller bearing cone (B) to 120°C (250°F).

8. Slide final drive housing vertically over rear axle.

9. Install snap ring (A).



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TM8008 (01OCT06)

56-25-9

Premium tractors 6230 to 6630 01/08 P11-643

Example

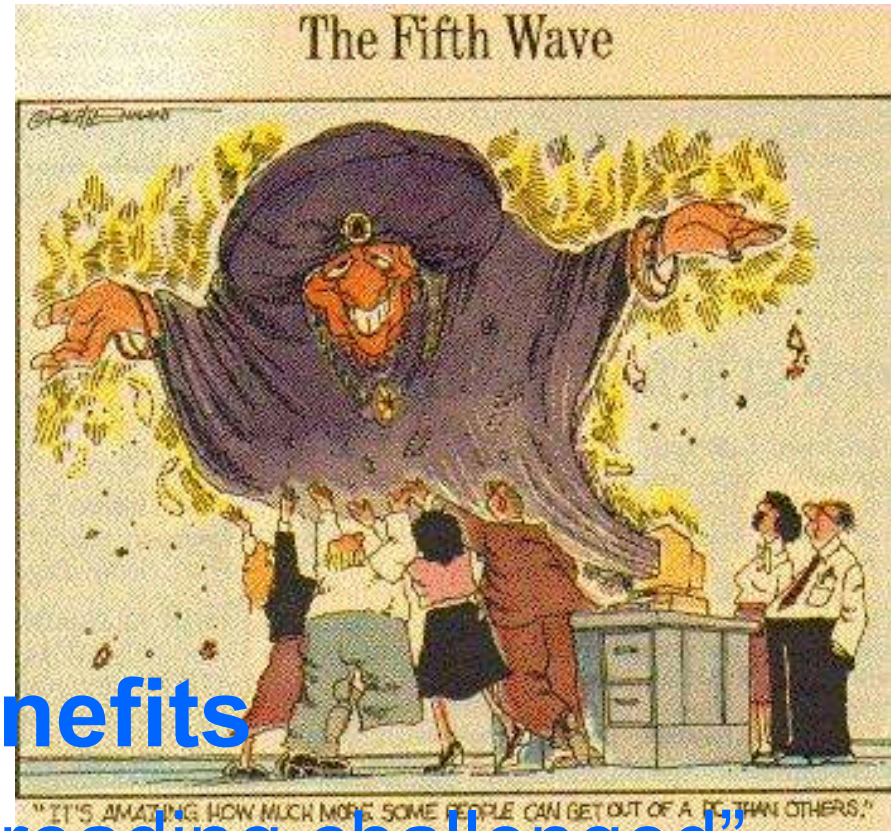
3 DVIA Player Active X

Concept's Benefits

- Reduces translation
- Reduces “iron” time
- Reduces rework

Users' Perceived Benefits

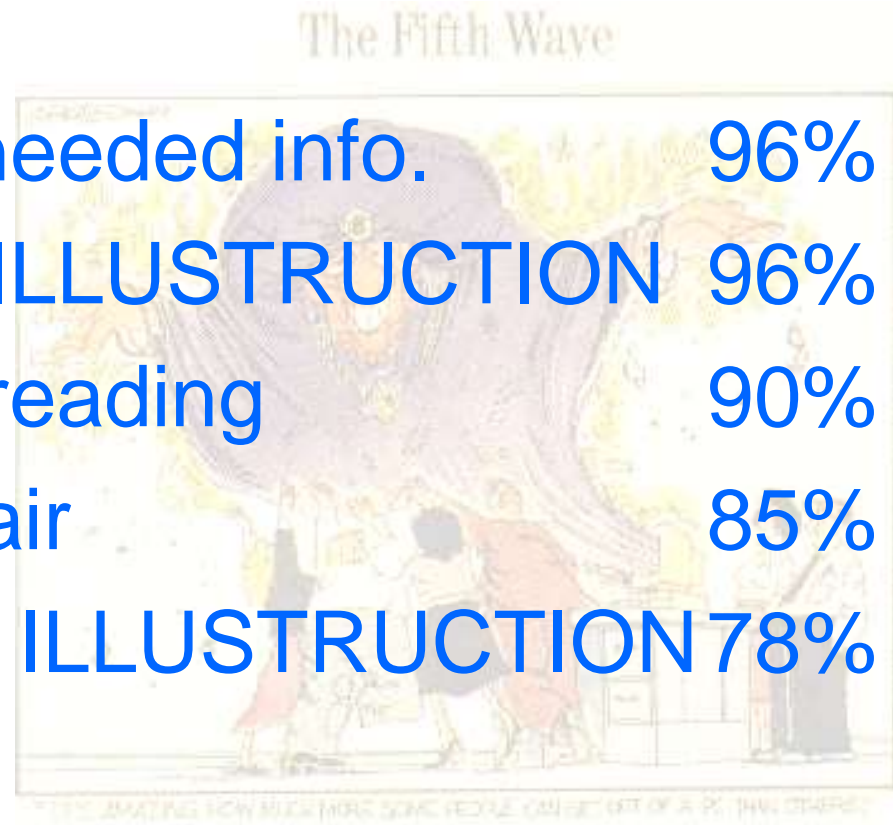
- Increase capability of “reading challenged”
- Improve comprehension
- Link Repair Manual & Parts Catalog



JD Pilot Results - User Feedback

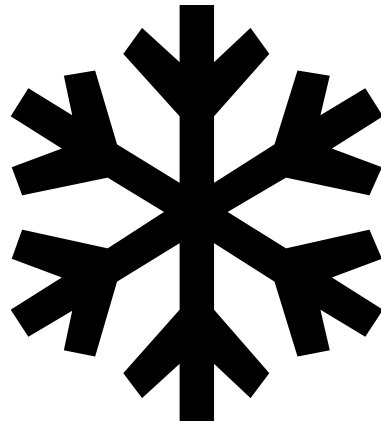
Technician Web-based Survey

- Animation delivers needed info. 96%
- “ better than ILLUSTRATION 96%
- “ faster than reading 90%
- “ speeds repair 85%
- “ can replace ILLUSTRATION 78%



Graphics Limitation

Pictures Require Interpretation



The Solution!

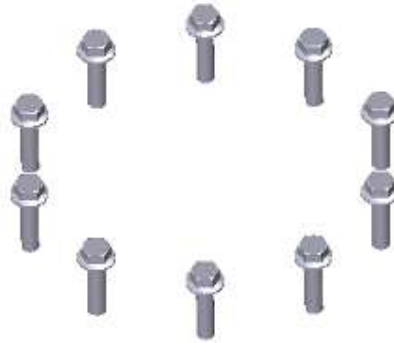
Standard &
Convention &
Education



SAE Graphics Based Service Info. Team

Developing Symbols & Graphic Conventions

Multiples?



Patterns?

Repetition?

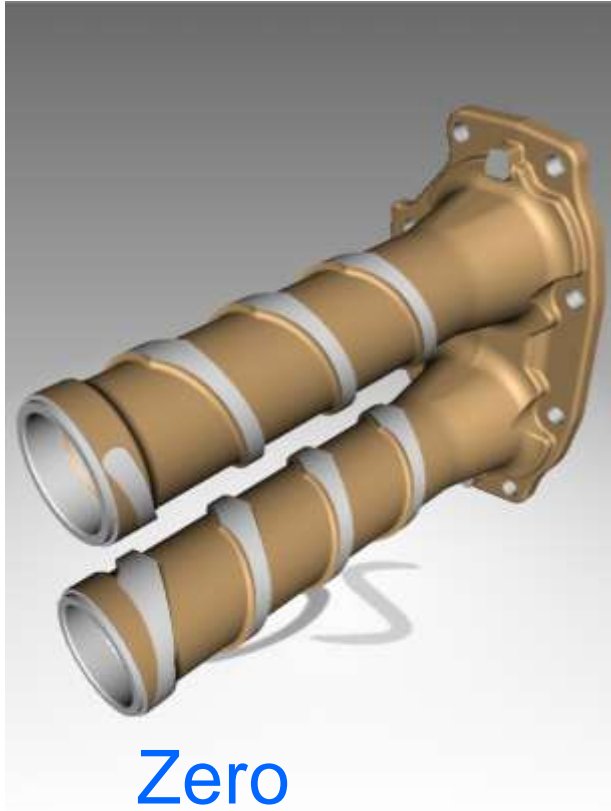


Issues

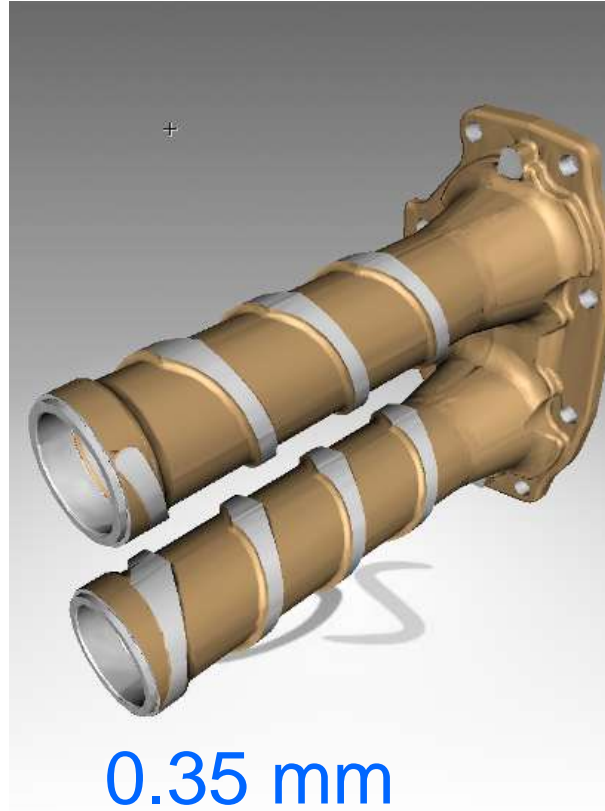
- Multiple media
 - ≡ Still (Black/White & Color)
 - ≡ Animated (2-D & 3-D)
- Multiple Suppliers
- Reuse
- Paper
- Translation Management
- Intellectual Property Protection



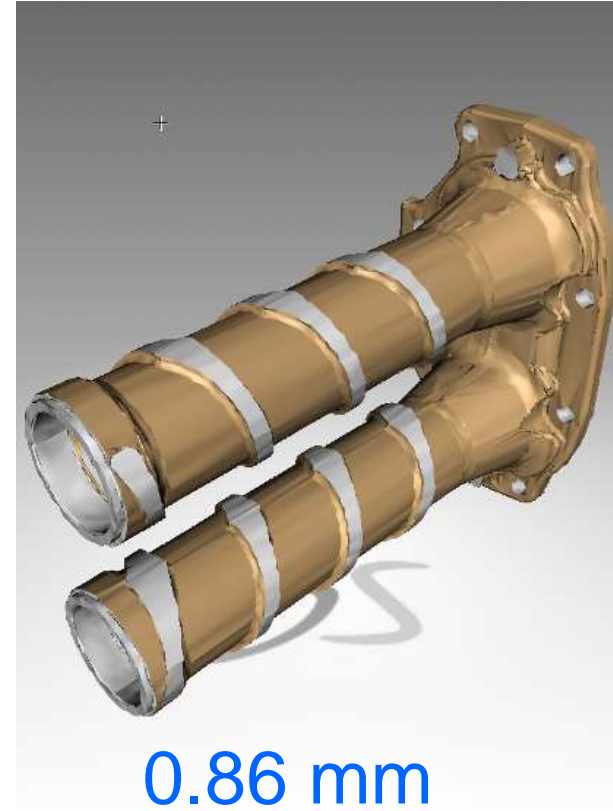
How Much IP Protection?



Zero
Distortion



0.35 mm
Distortion



0.86 mm
Distortion

Discussion

