

Vehicle Weight and Dimension Developments

The Rest of the World

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Dimensions Policy
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The Rest of the World

- New Zealand - HPMV
- Australia - PBS
- South Africa - PBS
- Europe – LHV, LZV
- South America - Bitren
- China

New Zealand

- Unitary state of two islands
- Eliminated A-trains per VWDS findings even before our M.o.U.
- Operational static roll threshold of 0.35 g
- HPMV system:
 - Template vehicles on designated highway system
 - Others with full road and performance evaluation
- Road User Charges, so one or two extra axles

New Zealand



New Zealand

- 100 km/h limit
- A curve 250 m radius or less every 4 km
- Roads often have no shoulder
- Overspeed in curves is common



Australia

- Six states and two territories responsible for roads and transportation that were unable to harmonise regulations
- A National Heavy Vehicle Regulator based in Queensland makes regulations that all states have agreed to adopt by reference, since February 2014
- Regulation by performance-based standards from 2007, NHVR now approves PBS vehicles

Australia PBS

- 4 road classes
- 16 performance standards
- About 1,000 vehicles approved
- About half are truck-dog (full) trailers
- Pressure to simplify PBS with templates for the most common configurations
- Local authorities continue to hold up access of approved vehicles

Australia

- Twin 40 A-train at 79 t with forced steer dolly



- BAA quad



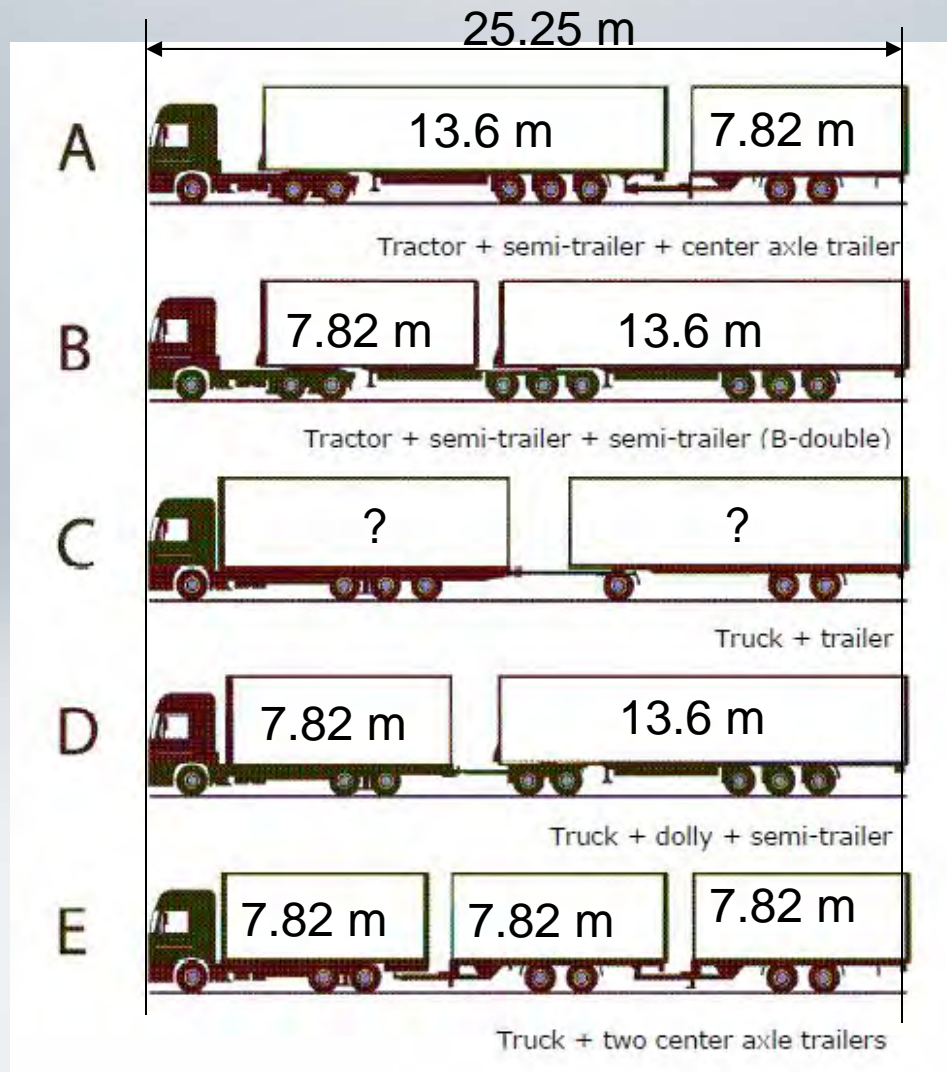
South Africa

- Nine provinces responsible for roads and transportation
- PBS program modelled after Australia's, with their own infrastructure standards
- Run through industry accreditation body
- Log truck-trailers, mine trucks, car carriers, articulated bus
- B-trains are also known to operate in other countries in East Africa

Europe

- 50 countries, many with provinces responsible for roads and transportation
- Directive 96/53/EC sets standards for vehicle configurations in international operation
- Sweden and Finland allowed 60 t at 25.25 m
- LHV/LZV trials in Sweden, Finland, Norway, Holland, Denmark, Germany, Belgium
- UK trial of 14.6 and 15.65 m trailers

European Modular System



Europe

- European Modular System is designed for international operation
- Sweden, Finland, Holland allow other configurations at higher weights
- Now doing performance evaluations
- Emissions and modal shift are major concerns
- Strong opposition to longer vehicles persists in many countries

Log Haulers in Sweden

74 t, 25 m



74 t, 25 m



90 t, 30 m



South America

- 13 countries, many with provinces responsible for roads and transportation
- European style trucks, truck-trailers and tractor-semitrailers
- Liftable axles
- B-trains in (at least) Colombia, Peru, Paraguay, Brazil, Uruguay and Argentina, but different rules

South America





China

- 22 provinces, 5 autonomous regions, 4 directly controlled municipalities, Hong Kong and Macau
- Responsibility for roads and transportation is shared between national, provincial and local governments

China

- Motor vehicle length is 18.1 m (59 ft)
- Semitrailer length is 13 m (42 ft), with 14.6 m (48 ft) vans from 2008
- 16.2 m (53 ft) semitrailers up to 2011
- Many semitrailers are registered as a motor vehicle, so are 18.1 m (59 ft) long
- Car carriers appear exempt from length limits

20 Toyotas!



- $7 \times 4.5 + 6 \times 0.15 = 32.4 \text{ m (106 ft)}$



26 Volkswagens!!



- Also about 32.4 m (106 ft) long
- Maybe 4.5 m (15 ft) wide

10 Trucks!!!



18 Trucks!!!!



Finally, Some Enforcement!



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Conclusions

- The process started by Canada in the mid 1980's has been endorsed around the world, and implemented in various ways
- PBS templates for common vehicles
- PBS is still useful for unique vehicles
- Every LCV/PBS/HPMV/LHV/LZV evaluation has found the operation brilliantly successful

Thank you for your attention!