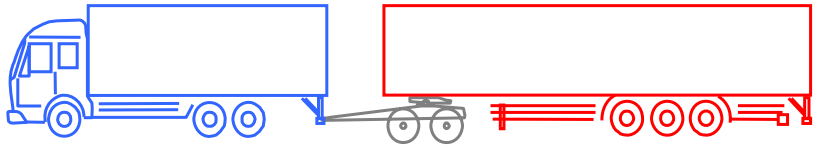
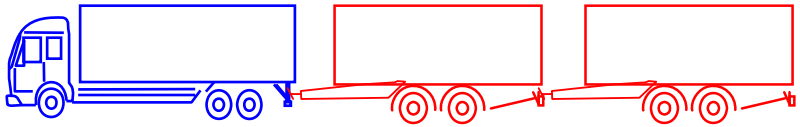
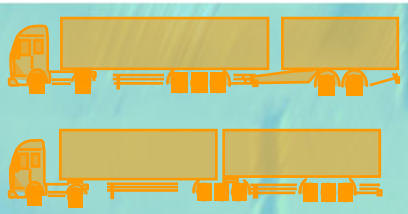
Config D



Config E



Actual used configurations



L	12	0	0	37	10
LH	27	21	3	51	1
	A	B	C	D	E

- Total: 162 combinations, 76 operators
- L=Longer, LH= Longer & Heavier
- L =< 50 tonnes;LH:=<60 tonnes

Combination behaviour compared

Different to 16,50 m combi	No difference
Length	Braking
(Mass)	(legal maximum) axle pressure
Swept path	Stability
Volume	Acceleration

EMS and political questions

- Sustainability;
- Traffic safety;
- Infrastructure;
- Intermodal competition.

Sustainability and EMS

- Two longer combinations instead of three;
- Average: +17 % fuel consumption;
- Average: + 40% more loading length;
- Fuel: reduction average: + 33% more tons,volume per l fuel (Kyoto!);
- NOx: Max -2 tot –4% of national road transport emissions (fractional replacement);
- CO2: Max - 3-5 % CO2 of road transport;
- (note : avg 16 tonnes freight/combi!).

Traffic safety

- Results earlier trials: no decrease of traffic safety measured;
- Strict conditions for roads, vehicles and drivers to be used;
- Cooperation with local road authorities: all roads checked by local road authorities before allowance to drive.

Traffic safety: bottlenecks

- Railroad crossings: debate;
- Overtaking of agricultural vehicles by EMS;
- Overtaking by other motor vehicles on single lane (rural) roads;
- Straight corner, right: swept path;
- 200-400 mln km’s (7-14% of total) presently driven by combinations can be reduced.

Infrastructure

- Limited allowance:
  - No city-centres, 30 km-zones, pedestrian areas
  - No railway crossings if trains are allowed > 40 km/h
  - Only roads with separated pedestrian/bicycle lanes (5 km exception)
- Note: Present maximum (legal): 60 tons over 12 m, axle load of 12 tonnes: Mobile cranes. Standard combination: 50 tonnes.
- Standardized road design (but local municipalities remain free): most cases no manoeuvrability-problem.

The shift to co-modality

- The Netherlands has had a long period of modal shift policy (1996-2002);
- Despite strong support and major incentives, minor shift resulted;
- 80% of all transport is on distances <100 km;
- All modalities should strive for higher efficiency, not discriminating one.

Other modalities

- No significant influence on rail and inland shipping (< 3%);
- A small part of combined transport (containers) to lose share particularly on relatively short distance;
- Important: Gross Combination Weight: heavy bulky goods are captive markets for rail and inland shipping;

The next phase

- “Experiencephase”: no limit on numbers of vehicles / # routes allowed per haulier, but still on exemption;
- From and to economic centres (“core areas”);
- Not on all (local) roads: Local road authorities decide regarding allowing EMS;
- New technical demands (EBS/ABS, blind spot mirrors, new rear sign, axle load measuring);
- Phase to last several years;
- Econ. Savings: > 200 mln€ / ann (Lisbon!);
- (Open to foreign combi’s!).

“EMS Network”

Conclusions

- EMS: not the solution to all our (future) problems (congestion, emissions, traffic safety);
- It can absorb part of expected future growth in (road) transport;
- It can help in attaining goals (Kyoto, Lisbon), lowering costs and increase transport efficiency;
- Is more interesting for light goods, than heavy goods (not heavy bulk);
- The EMS is especially interesting for longer distance hauls (> 50 km).

Thank you for your attention!