Education and Culture
Lifelong learning programme
COMENIUS

MINUTE FOR GROUP WORK
COMENIUS School Partnerships

"European CNC-Network – Train for EUROPE – RELOADED"

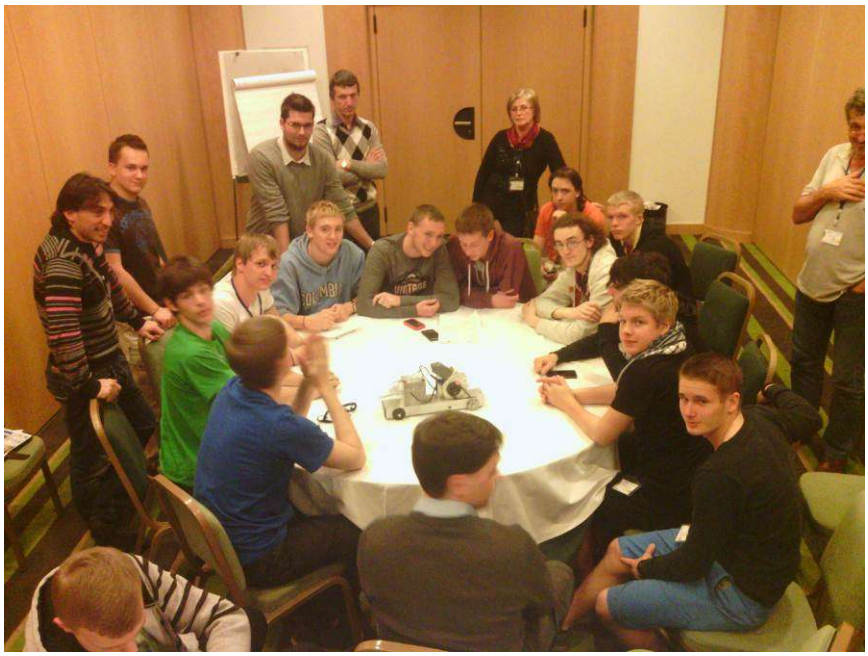
Meeting Description	Second Project Meeting in Lisbon (Portugal)
Meeting hosted by	CENFIM

Date / Time / Place	Thursday, 8th March 2012 and Friday, 9th March 2012
Name of Workline	Workline A – Locomotive
Name of Workgroup	Group 2

Representative workgroup member	[AT-STP] Michael Fahrafellner
Co-representative workgroup member	[IE] Colin O'Neill
Co-representative workgroup member	

Further workgroup members	Students and teachers from [AT-STP], [DE], [HU], [PT], [IE], [LT], [SI]

Minute written by	[IE] Colin O'Neill

Description of work progress: Topics / Tasks / Results / Decisions / Facts of importance	**Responsible school(s) or person(s) incl. deadlines**
We started off by introducing ourselves and then reading the guidelines.  **Workline A Locomotive - Group 2**	

T4EU-R PT A Locomotive 2.doc

Description of work progress: Topics / Tasks / Results / Decisions / Facts of importance	Responsible school(s) or person(s) incl. deadlines

We talked about the problems of the last project, e.g. the power, and we discussed lots of ideas.

The overall design was discussed and voted on:

Steam = 1 vote
Old diesel style = 1 vote
TGV = 2 votes
Rail Jet = 9 votes

We discussed how the wheels would be driven:
Chain Drive, Worm & Wheel, and Belt Drive (toothed).

Drive Types ↓	Pros	Cons
Chain	Strong	Maintenance
	No Slip	Noisy
	Cheap	
	Easy	
	KISS	
Worm	Compact	No Modification
	Easy	
	Cheap	
Toothed Belt	No Maintenance	Length
	Silent	
	Cheap	
	Easy	
	KISS	

Description of work progress: Topics / Tasks / Results / Decisions / Facts of importance	Responsible school(s) or person(s) incl. deadlines
 The Irish delegation brought a simple locomotive with a chain drive. One idea was a Rack on the track and a Gear (pinion) on the locomotive. Locomotive Axles: 2 total – 1 driven or 3 total – 2 driven? In the end we decided on 4 axles with 2 driven. 2 axles driven by 2 motors (might have problems). Chassis made of Steel to add weight and cheap. Cornering problems: Differential Drives considered. Wheels in Aluminium for friction. **<u>What to do next:</u>** Do more research on using a Steel chassis_____ Research the use of Bogies_____ Look at suitable types of Motor_____ Try to find a Differential small enough and strong enough_____ Overall Locomotive Design (RailJet)_____ Wheels (shape, material, how axle is fixed, etc)_____ Housing (to be transparent)_____	[DE] [AT-STP] [SI] [IE] [PT] [HU] [LT]