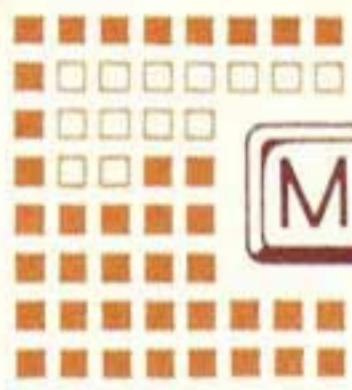# THE TRANSPORT GAME

Designed and developed by Chris Sawyer
Graphics by Simon Foster

THE TRANSPORT GAME

Design and PC programming by Chris Sawyer
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Introduction

On starting the game, the player is presented with a large 3D game-world, with things like towns, industries, forests, airports and railways all simulated in great detail. The player initially has a fairly small amount of money with which to start his own transport company - he can build railways, buy trains, build roads, buy buses and lorries, build airports, buy aircraft, build sea-ports, and buy ships. Money is earned by transporting goods or passengers from one place to another - payment is made when appropriate goods are received (for example, coal arriving at a coal-powered power station). As the game develops, other transport companies (simulated by the computer) will also build railways, roads etc., and will try to compete directly for lucrative business, by running faster services, or more regular services than the player. The ultimate aim of the game is to survive 100 years, and retire with a large 'bonus' in proportion to the value of the company on retirement.

The Display System

The game world is an isometric 3D in hi-res (640x480), 256 colour dislpay graphics. Fully zoomed in, the game world is 450 times larger than the area displayed on-screen, and fully zoomed out, about 1/8th of the game-world can be seen. The game-world view fills most of the screen, with a row of control icons along the top edge, each of which brings up another control window or more icons. The game view can be pixel-scrolled around, by holding down the right mouse button, and all other windows are displayed on top of this master-view, and can be dragged around using the mouse, as required.
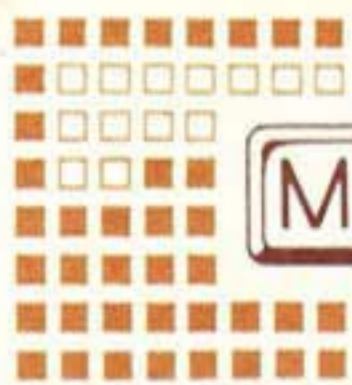
2 The Game World

Everything that happens in the game world will have consequences - from bulldozing trees (which upsets the environmental lobbyists) to running an irregular train service (which would deter people from using the trains). The computer-controlled transport companies will have to deal with the same consequences, and abide by the same rules as the player's company - the player will be able to actually see what the other companies are doing, right down to watching their trains, buses and other vehicles driving around. If the player notices that a computer-controlled company is making a lot of money on a particular route, he could build a competing service on the same route, and try to attract goods and passengers by running more trains/lorries etc., or running a faster service. Animation will be a feature of the game - the pit wheels on coal mines rotate, smoke comes out of factory chimneys, trees grow or die, even grass grows.

The game-time will pass much faster than real time - a day of game-time passes in 8 seconds of real time, which allows the years to pass at a reasonable rate, so new industries and new technologies become available at appropriate intervals throughout the game. The movement of trains, road vehicles etc. is at 'normal' speed. The game starts in 1950, and finishes in 2050.

3 Rail Transport

A railway transport system needs railway track - the player calls up a window of railway-building icons, and using various pieces of railway track, builds the railway. The player's railway track cannot join onto competing company's railway track (but can bridge it if required). Station platforms must be built wherever a train is to pick up or drop off goods or passengers, and a train depot is required for building and servicing trains. Land can be cleared of obstacles (rock etc.) and can also be raised or lowered, and railway bridges and tunnels can be built. If more than one train is to be run on the railway, signals must be positioned on the track - these are controlled by the computer, and prevent more than one train from entering a particular section of track (as in real life). The player builds a train at the train depot, selecting from various types of steam, diesel or electric locomotives, and adding
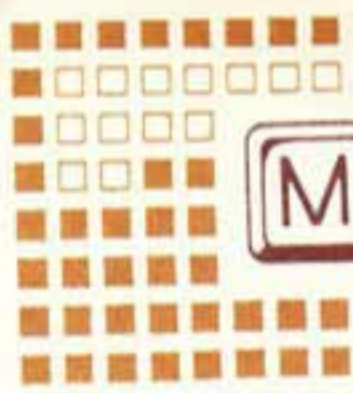
vehicles for the appropriate cargo. The train can then be sent on its way without any orders (in which case it will stop at every station it passes) or a list of orders can be given to the train, to make it go to particular stations, and wait for particular cargoes. The trains (and all other transport vehicles) are displayed in the company's chosen colours.

4 Road Transport

Road transport needs roads - existing roads can be used, or new roads built. A lorry or bus depot must be built, and loading areas/bus stops built to allow loading/unloading of goods. Buses and lorries can then be manufactured, and operated in a similar way to trains.
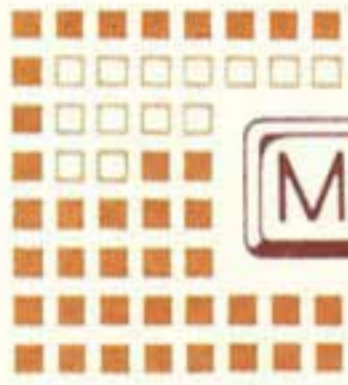
5 Air Transport

Air transport requires airports (several will exist at the start of the game), and aircraft (which are built in hangars at the airport). Aircraft are operated in a similar way to the trains and road vehicles, except that they have no restrictions on routes. Helicopters can be used to transport people to and from oil rigs.

6 Sea Transport

Ships require a dock, some of which will already exist at the start of the game. Ships will be slow, but can carry a large amount of cargo - they are probably most useful for bringing oil ashore from oil rigs, but could perhaps be used in man-made waterways to carry coal, for example.

7 Towns/Cities

Towns can develop in various ways, mostly dependent on the transport services in the area - a poor transport system may result in the town shrinking, with people and industries moving to better served areas. The player's standing with the town council affects whether the council will allow railways to be built in the area, roads to be modified, buildings demolished etc. The council's attitude towards the player's company depends on the quantity of complaints received about the player's company (late trains, not enough trains, too many houses knocked down etc.) The game may include the possibility of bribing the council to get

permission for demolition/building, or perhaps to get advance notice of new industries to be built (giving the player a head-start for building a transport system to cope with the new cargo).

5. Industries

Currently, there are eight cargo types in the game - people, mail, coal, oil, grain, general goods, livestock and wood. People and mail can be transported between towns, coal can be transported from mines to power stations, oil from oil rigs to refineries, grain from farms to factories, goods from factories to towns, livestock from farms to factories, and wood from forests to timber yards. Rail and road transport can be used to transport anything, but air transport will probably only be profitable for carrying people and mail, and ships only for heavy goods.

Additional Features

a) Communication with towns, negotiation for transport routes etc.
b) Communication with other companies, mergers and take-overs.
c) Dodgy deeds, sabotage, employing spies to get information on other company's plans.
d) Natural disasters - whirlwind, earthquake.
e) More cargo types.
f) Futuristic transport types.
g) Serial link communication - networking the game may be possible.

Machine specifications

The game will require a minimum of a 386 PC (486 preferred), 4Mb RAM, 512K SVGA graphics (capable of 640x480 in 256 colours), mouse, and DOS 5. A low-resolution version of the game can be done if necessary.

Competing Products

'Railroad Tycoon', 'A-Train', and 'Sim-City 2000' are the most obvious competition to this game. Compared directly to this game, Railroad Tycoon has very poor graphics, no road, air or sea transport, and very poorly handled computer-controlled competing railways; A-Train has bland graphics, very poor animation, and a bad control system for

trains, and doesn't include road, air or sea transport; Sim-City 2000 is basically a city simulator, where the goal is to build a city, not a transport network, and has less graphical detail than this game.

Development Schedule (for remainder of development) and calculated at one calendar month per milestone.

Milestone 1

Railway and train building, orders, servicing, stations, bridges, tunnels, loading/unloading, information windows. Road vehicle building, orders, servicing, loading/unloading, information windows.

Milestone 2

Airport, aircraft, ship port, ships, servicing, orders, loading/unloading, helicopters, information windows.

Milestone 3

Industries, cargo generation, payment. Town/city development. Forest development, farms, land-use consequences. Town council interaction.

Milestone 4

Computer-controlled railways - planning and building railways, operating trains, information windows.

Milestone 5

Computer-controlled road, sea, air transport. Interaction between player and computer-controlled transport companies. Serial link communication.

Milestone 6

Sound effects, music. Events (disasters etc.) Retirement.