

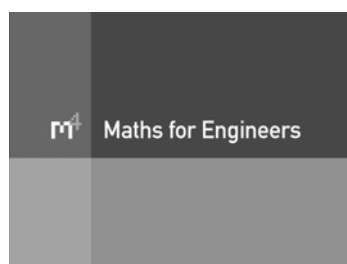
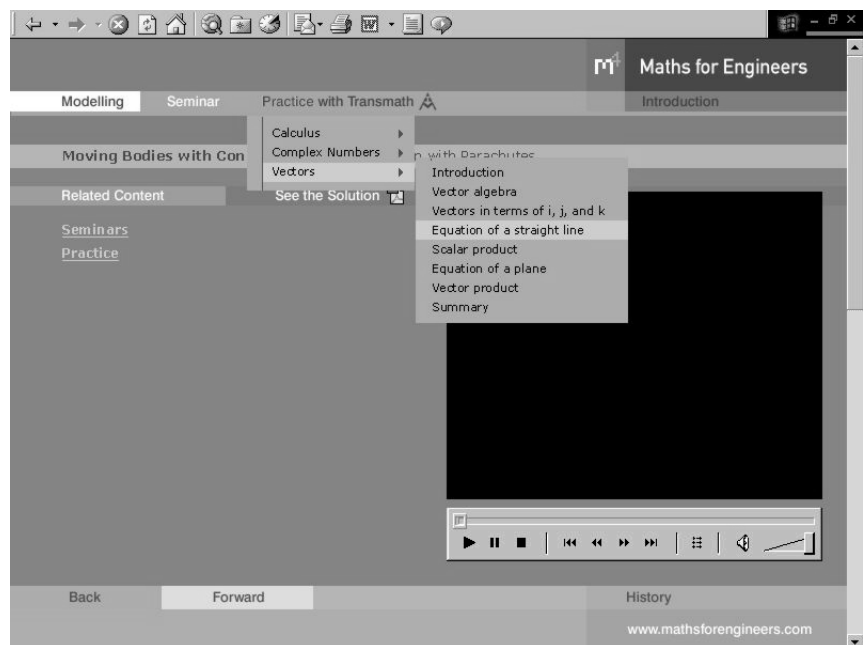
# Maths for Engineers DVD - the Prototype

When it comes to the 'Maths Problem' as experienced in Engineering and Physics departments, there is a unity of recognition rarely seen in university circles. Students are increasingly unable to cope with the essential maths required for first year studies and it is not their fault. There is also little point in repeatedly pointing a finger at the A-level syllabus, at GCSE, early secondary teaching and at the damage inflicted in the primary schools. That will take twenty years to repair. Something, in fact lots of things, needs to be done for students embarking on HE courses now.

Some years ago we were encouraged by Dr Tim David of the University of Leeds to address the Problem through a series of engineering case studies recorded on video. Fifteen videos were produced with topics ranging from avalanches to heart valves drawing in skills from calculus, complex numbers and vectors. The videos were beautifully produced to high broadcast standard by the TV Unit of Leeds University. They work.

But having built the disk we are only half way through. We want to test it in several contexts. Does it work for you and will it work with your students? We want feedback before we publish; feedback at several levels, feedback about detail, about confusions, about mistakes. And to that end we are inviting individual academic staff in universities and colleges to volunteer for piloting. We are concerned to get this product as good as we can,

Like Topsy they have grown, and in July the first prototype of an adventure in guided self study on the new medium of Digital Versatile Disk was produced for testing. On one DVD are the fifteen videos (3 hours). These are the modelling resources and each case study - there are at least thirty - sets up a mathematical model of a real event. Solutions to the models are set out in text and from these you can delve into the underlying pure maths which underpins the models. This pure maths component is in the form of thirty video seminars (9.5 hours). But that is not all. A student needing basic tuition and practice in the fundamentals of each topic can access the familiar TransMATH resource. All on the one disk. Navigation is seamless with multiple routes, both logical and idiosyncratic, to give to academics and students alike hours of skill building and, dare we suggest, pleasure.



This is a project which has grown out of existing material - a pre-requisite of the Innovations Fund which financed it - and has not attempted to start from scratch and build a definitive distance learning

course. Rather it has addressed the lecturer with an additional flexible tool to build into their own teaching and to use when guiding students in remedial need.

so that when we launch next summer it will be a real contribution to alleviating the maths problem. The reward for piloting a disk will be a free one for your own institution and we seek names now from those who can do it in a timescale from September to November.

If you would like to help, please get in touch with me at EBS as soon as possible.

Dr Jim Stevenson (email: [jim@ebstrust.u-net.com](mailto:jim@ebstrust.u-net.com))  
The Educational Broadcasting Services Trust  
36-38 Mortimer Street  
London, W1W 7RG

Tel. 020 7765 5023 Fax. 020 7580 6246