Gates' well-travelled road

The Road Ahead, by Bill Gates, Viking, 1995, $35

In his recent Comdex speech, Bill Gates explained his excitement about the information highway and committed Microsoft to being part of it. If that was the policy speech, this book is the manifesto.

The Road Ahead has been "vapourware' for some time, has it been worth the wait? The book is not as entertaining as *Accidental Empires,* not as detailed in its history as *Gates,* nor as analytic as *Computer Wars* - but when you have $US12.9 billion (excluding Dr Nathan Myhrvold's Microsoft stock - who co-wrote the book), people listen.

Gates begins by stating: 'Anyone expecting an autobiography or a treatise on what it's like to have been as lucky as I have been will be disappointed...This book looks primarily to the future.'.

His intention is to provide a foundation for 'understanding, debate and creative ideas about how we can take advantage of all that's sure to be happening in the decade ahead', and also for a few Microsoft product placements - '...the spreadsheet application I know best, Microsoft Excel, includes a feature called a pivot table...'

In twelve compact chapters (275 pages) he explains with clarity (but less originality) the technology, industry dynamics, economics, and policy choices which mesh to form the potential of the information highway. There are no prerequisites - the first two chapters are largely introductory.

Chapter One compares the coming information highway with similar technological shifts (print, railroads, telephone). Chapter Two explains the fundamentals of digital technology.

Along the way additional explanations are offered, such as a brief and simple explanation of the mathematics of encryption, and the technology of virtual reality.

A chapter is also devoted to gleaning lessons from the past two decades of the personal computer industry. The importance of compatibility, the momentum of market share ('positive spirals') and the importance of software are highlighted. These lessons are expected to hold true in the coming decade.

The remaining chapters are a distillation of simple analysis and clear thinking about the future of computer mediated communications.

Much of the book is reasoned and optimistic prediction. We will live in a world of set-top boxes, wallet-PCs, and information kiosks. Voice recognition and pen-based computing will (eventually) be perfected and will form part of an interface to a vast amount of networked information available on demand.

For example, the wallet-PC will hold our digital cash, be our communication device, and our personal assistant. It will guide us on the road, enable entrance to concerts, and answer oral queries by searching the information highway.

Some concerns are also addressed. Are you concerned about information overload? Then expect navigational aids which will filter information and collate items of interest. Worried about complicated interfaces? Then rely on intelligent agents which will 'humanise' your computer. Privacy? Encryption holds the key...

The impact of all this will be pervasive. Social impacts include: a relocation to rural communities, a redefinition of the boundary between work and home, a renaissance of participatory democracy, and dramatic opportunities for education. Even architectural choices will be influenced.

There will be significant changes for business. The travel, banking, newspaper, and advertising industries are specifically discussed.

Global effects include: the demise of middlemen, the radical reduction of distribution costs for intellectual property, and the elimination of geographical market boundaries.

Ambiguities are highlighted, and Gates encourages readers to participate in the coming debate.

How do we manage equitable access to the information highway? How do we deal with children being able to discover almost anything they want to? Will society shatter into a multitude of fragmented communities? Will we rely on the highway to the point of vulnerability? How should the government manage competition in communications?

Furthermore, all these developments must be preceded by an infrastructure which is not yet present and that will only follow interim measures such as ISDN. Bill forecasts an evolution to the information highway from the Internet of today punctuated by combat between telecommunications and cable proprietors.

Today's Internet is handicapped by a lack of security and a proper billing system and so, in the meantime, 'it's important for its continuing credibility that expectations aren't cranked up too high.'

This book is an enthusiastic and simple analysis of a complex industry in the midst of historic change. Some readers have read it all before, but those whose interest is fresh will be rewarded.

For die-hard Bill boffins, there are numerous anecdotes to underline, and a CAD sketch of his new house - neato! ❏   *Tamir Maltz*

Email: tamim@magna.com.au