

PRESENTER



Dr A Sathyendran, Principal Consultant, NZ Mobile Forensics Ltd, Auckland

Sathy is an independent telecommunication specialist with over two decades of experience in cell phone technologies, policy and regulation. He has a PhD in Electrical & Electronic Engineering from the University of Auckland, specialising in wireless technologies and cellular signal propagation. Sathy has significant experience in working on court cases and Commerce Commission investigations. At Vodafone he worked closely with both in-house and external legal teams, providing expert technical analysis and advice across a range of legal issues for court cases and regulatory reviews. As an independent consultant, Sathy has used mobile call and location analysis to corroborate or disprove evidence for both criminal and civil cases.

The statements and conclusions contained in this book are those of the author(s) only and not those of the New Zealand Law Society. This book has been prepared for the purpose of a Continuing Legal Education course. It is not intended to be a comprehensive statement of the law or practice, and should not be relied upon as such. If advice on the law is required, it should be sought on a formal, professional basis.

CONTENTS

1. INTRODUCTION.....	1
2. LOCATION ACCURACY OF CELL PHONE DATA	3
CELL SITE ONLY	3
CELL SITE AND SECTOR.....	4
3. ACCURACY OF TA.....	5
WHAT IS TA	5
HOW TA IS USED IN COURTS	6
<i>The approach.....</i>	6
<i>Validation of this approach.....</i>	7
DOES THIS APPROACH PROVE THE LOCATION BEYOND REASONABLE DOUBT?.....	7
<i>Significant variation in propagation characteristics at a location over time.....</i>	7
<i>The Validation Exercise data contradicts the conclusion</i>	10
<i>A few sample points per arc will not give 95+% confidence</i>	11
4. CELL PHONE DATA TO CHALLENGE OTHER EVIDENCE	13
CASE 1	13
CASE 2	13
CASE 3	14
CASE 4	15
CASE 5	15
5. APPENDIX A	17
CELL PHONE NETWORK BACKGROUND.....	17
<i>Sectors in a cell site.....</i>	17
<i>Cell site coverage.....</i>	18