

GROUNDING

DESIGN

TEST

TRAINING

**DVT Solutions Inc.**  
Specialized in End-To-End System Services

SIMULATION

SOFTWARE

REGULATORY

EFT

ESD

EMI

EMC

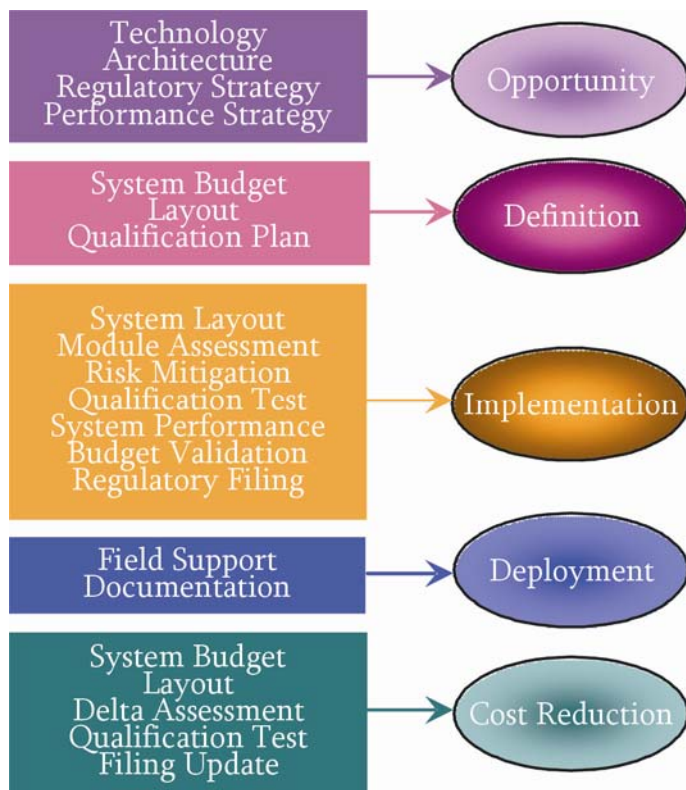
SURGE

RFI

SHIELDING



## -DESIGN FOR COMPLIANCE



DVT Solutions Inc. is a one-stop System Engineering Solutions Center, providing value added solutions for EMI, EMC, ESD, Antenna, Power, Distribution, Grounding and Software challenges for all stages of product development. Let the challenge be at Opportunity or Definition or Implementation or Deployment stage of Product Development, our in-house experts have cost-effective and optimum solutions for almost every scenario.

45yrs of in-house expertise on EM, Power & Software related projects and with a team of energetic, seasoned professionals having strong technical expertise, our company is always ready to assist in solving customer product design, test and compliance scenarios.

### SOLUTIONS

Electromagnetics  
Antennas  
EMI, EMC, ESD  
Grounding  
Shielding  
Filtering

### CONSULTING

Product Design  
Compliance Testing  
De-Risk Strategy  
Test Facilities & Equipment

### SERVICES

Regulatory Approvals/Homologation  
Custom Test Software Development  
Global Compliance Strategies  
Antenna Design Simulations  
EMI/EMC/ESD Budgeting  
EMC and Antenna Training

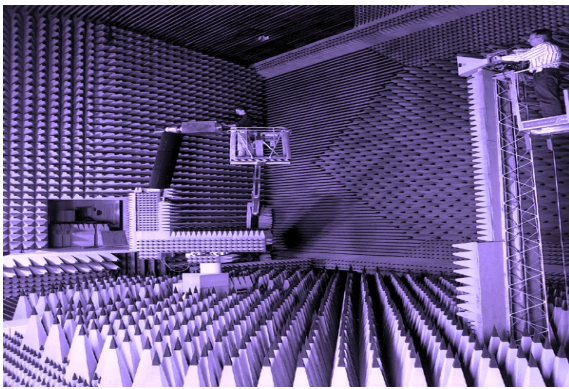
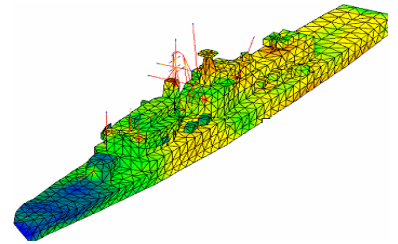


# ANTENNA ENGINEERING



Our Antenna Engineering knowledge has contributed to the success of our clients through custom solutions to Microwave, Millimeter wave and EMC Antenna Design, Analysis and Test Challenges. Our experts were also commended for their Innovative Solutions.

Our EM Software Expertise is focused on providing Custom Solutions in EMC and Antenna Disciplines using Numerical Electromagnetic Codes and Commercially available Software. Whether it is a Smart Antenna Design or EMC Situation Analysis, our Experts have the Right Background and Experience to Provide Smart Solutions.



## TEST CONSULTING

- Calibration
- Radiation pattern, Gain, Polarization
- Impedance
- Gating
- Far Field & Near-Field
- Custom Measurements
- Measurements in Presence of Parasitic Radiators

## TEST FACILITIES

- Open Test Range
- Anechoic Chamber
- Near-Field & Compact Range

## ANTENNA DESIGN

- Feeds for Parabolic Cassegrain Reflectors
- High F/B ratio applications.

- Planar Compact Comparator for Monopulse

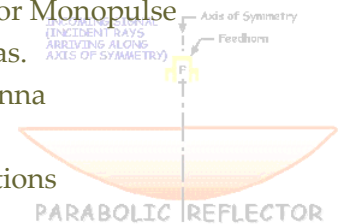
- Waveguide Slot-Array Antennas.

- Cylindrical Phased Array Antenna

- EMC Antennas

- Antennas for Wireless Applications

- Fractal and Smart Antennas



## ANTENNA ANALYSIS & SIMULATIONS

- Radiation pattern, Gain and Impedance

- Numerical Modeling & Manufacturing

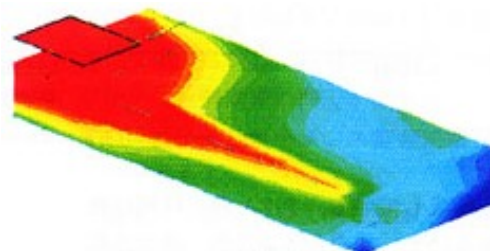
- Tolerance Analysis

- Effect of Parasitic Radiators

- Custom EM Solutions for EMC & Antennas

- FDTD & Moment Method Techniques and

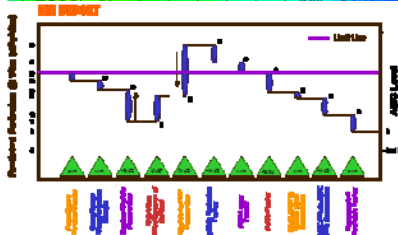
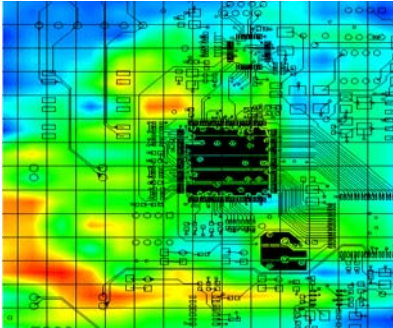
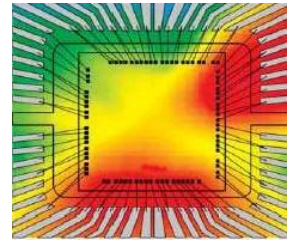
- Commercial Software Packages





# EMI, EMC, ESD ENGINEERING

As part of the EMC Design services, we offer ASIC, PCB, Module and System level performance estimates, detailed analysis and budgets and custom solutions to meet National and International Regulatory and Customer EMC Specifications (IEC, ETSI, FCC, RSS, Telcordia {Bellcore}, Bell Canada, RTCA).



## DESIGN

Design consulting at all stages of product development.

Architecture, Prototype, De-risk, Re-Spin

International, Military, Medical & Avionics Standards Interpretation

ASIC and PCB EMC Design Simulations & troubleshooting.

System and sub system level Assessment & Budgeting.

Optimum Shielding, Grounding, Filtering Designs

EME and EMC control Plans and Reports.

Special Design Guidelines for Custom Scenarios.

Root Cause Analysis of all EM related challenges

Custom EMI/EMC Design Solutions for all Installations Hydro, Avionics, Industrial, Military & Residential

The extensive experience in managing customer EMC Test programs enable us to provide value added services to develop standard and custom test plans, manage and witness EMC test programs



## TEST & REGULATORY APPROVALS

Design and commissioning custom EMC Test facilities (Semi Anechoic chamber, GTEM, Absorbing Clamp Slide-way, Pre-compliance, unique test setups for design assessments)

Site Surveys and EM Environment Assessment

In-Situ Testing for Large and Heavy Equipment

EMC testing at Customer premises

Custom Test tools, Setups, Method and Procedure development

Commercial, Military, Medical, Automotive, Avionics Test Consultation

Wireless and Telecommunication, Products Test Management

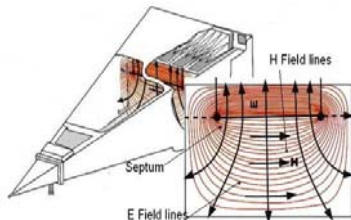
EME and EMC Test Plans and Test Report Generation

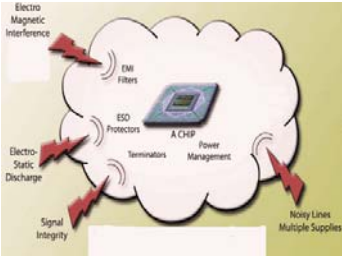
End-to-End Management of EMC Test programs to FCC, IC & CE Mark

Scheduling, Lab and Test Audits, Test Plans, Test Reports

Single Stop Global Approval Management for All products

US, Canada, Europe, Australia, China, Korea, Taiwan, Japan, Mexico





One of the Key and Interesting DVT Solutions Service portfolios is Technical Training. Currently, the Technical Training is offered in Canada, United States and worldwide. Coverage is limited to Design, Modeling and Measurement of EMI, EMC, ESD, Smart Antennas and Broadband Wireless areas. We are continuously expanding.

## EMI, EMC, ESD

- Cabling for System EMC
- Grounding Techniques for Telecommunications
- EMI Filtering and Shielding for Systems
- Designing Systems with EMC
- EMC Budgeting- Modeling, Analysis & Validation
- EMC Trouble Shooting Challenges & Techniques
- Printed Circuit Board Design Techniques
- EMC of ASIC
- SMPS-EMC Challenges and Solutions
- EMC Design Techniques for Digital & Analog Circuits
- EMC of High Speed Digital Circuits
- System Level EMC Challenges and Solutions
- Module Level EMC Design Techniques for Compliance
- ESD Design for Equipments

## ANTENNA

- Fundamentals of Smart Antenna
- Smart Antenna Technology
- Smart Antennas for Mobile Communications
- RFID

We have Seasoned, Experienced and Industry Recognized Experts in each of these areas to provide Public as well as On-Site or In-House Technical Training.

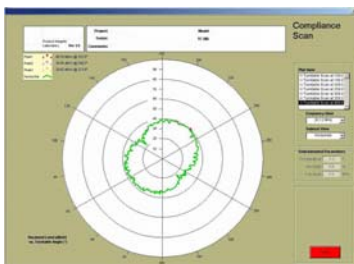
Our Training duration can start as small as one day to a maximum of three days in one sitting to enable optimum learning. Many topics could be covered in a multi-day Training or a single topic can be covered in-depth in a day long session.

## BROADBAND WIRELESS

- Wireless IP
- Wireless LAN
- Wireless Services / Applications

# SYSTEM ENGINEERING

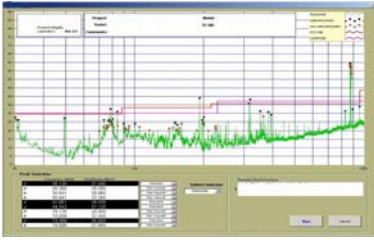
We continue to provide System Level Power Protection, Distribution and Grounding Solutions, meeting Goals and Objectives of EMI, EMC, ESD, and Antenna discipline challenges of Electronics and Communication Systems.



As an offshoot of providing SINGLE CYCLE System Solutions over past 10 years, we have gained valuable experience in developing and delivering optimum System Automation Solutions. We have in-house expertise in providing best and cost effective Turnkey Automation and Software Solutions using LabVIEW, C++, Visual Basic and Access.

## POWER& GROUNDING

- System Power Architecture
- AC, DC Power Distribution
- Grounding Strategy
- Lightning Protection for AC & DC
- Analysis, Simulation and Test



## TEST AUTOMATION & SOFTWARE DEVELOPMENT

Faster, reliable RF, EMC, Antenna & Calibration Test Automation

Testing and verification of Automation Software.

Custom Test Automation Software Architecture Development

{Simultaneous test execution, hot standby, embedded quality system and controls, Automatic Report Generation, Custom Performance Monitoring}

## CUSTOM SERVICES

Design and supply of custom HW & SW Solutions for Systems.

ISO 17025 Accreditation of Test facilities.

Accelerated Life Test procedures to Precipitate and Detect Field Failures.

Root cause Analysis

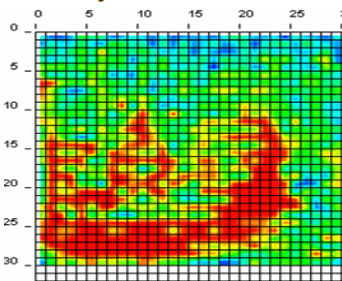
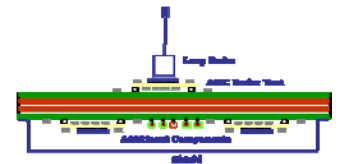
We also offer Custom Solutions, Safety, Environmental, Mechanical, Interconnect Test management services, Custom training services in EMC Test and Automation, Accelerated Life Test management, HW & SW System Solutions, ISO 17025.

## DESIGNER VERIFICATION TEST

The primary source of all EMI & EMC challenges of any electronic systems is electromagnetic fields and noise currents on and near the PCB surface.

Knowledge of the EM fields and noise currents very near to the PCB surface will help to identify the components, circuit and layout responsible for the EMI challenge.

Once the relationship is understood, Board and system designers can easily identify the root cause of the EMI challenge and can modify the board design to be EMI compliant.



## PCB, CABLE & ASIC

Near-Field EMI Spectral Analysis

Common Mode EMI Spectral Analysis

Single Frequency EMI Contour and 3D Maps with HOT spots

Multiple Frequency Composite Contour and 3D Maps

A-B Delta Emission Assessment analysis in Near-Field.

Estimation of 3m & 10m Far-Field emissions levels.

For More  
Information:

### CORPORATE OFFICE

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