- Own it
- Get it right
- Disagree without being disagreeable
- Loyal opposition and unity of command
- Beautiful systems*
- User Self-Service
- Teamwork
- Continuous learning and improvement

5 Star SERVICE
DALLAS AREA RAPID TRANSIT

Vision
DART Technology, your trusted advisor for technology solutions.

Mission
To deliver beautiful systems*, reliable technology and innovative information solutions with extraordinary customer service.
*Tom Peters – "In Search of Excellence"

DALLAS AREA RAPID TRANSIT
1401 PACIFIC AVENUE
DALLAS TEXAS 75202

I ♥ Technology

OPEN HOUSE EVENT IN CONJUNCTION WITH THE 2019 MAX CLASS

ROUTE GUIDE FOR APRIL 30TH, 2019

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"A genuine leader is not a searcher for consensus, but a molder of consensus."
- Martin Luther King, Jr.

Dr, Julius Smith
VP/CIO/CISO

Route Schedule by MAX Team

Knowledge Stop	Location	Subject/Topic	Presenter	MAX Team 1	MAX Team 2	MAX Team 3	MAX Team 4	MAX Team 5	MAX Team 6
Introduction to Technology and Mobility as a Service - Technology Support			Dr. Julius Smith, VP/CIO	9:00-9:05					
2nd floor			Route Guide:	Suzanne Uwicyeza, Sr. Business Analyst	Derek Mendoza, Tier III Support	Cordell Hudson, 2018 MAX Graduate	Minh Vo, ITS Manager	Jorge Garcia, 2014 MAX Graduate	Ray Garton, Sr Business Analyst
Data Analytics	Brainstorming Room	GoPass Integration	Alan Gorman, Principal; Data Analytics	9:05 Am to 9:15 AM	9:05 Am to 9:35 AM	9:05 Am to 9:35 AM	9:40 AM to 9:50 AM	9:40 AM to 9:50 AM	9:40 AM to 9:50 AM
Enterprise Applications - Operations	Brainstorming Room	An agency wide change to asset management - EAM implementation	Elisa Cunningham, Interim AVP Applications	9:15 Am to 9:25 AM	9:15 Am to 9:25 AM	9:15 Am to 9:25 AM	9:50 AM to 10:00 AM	9:50 AM to 10:00 AM	9:50 AM to 10:00 AM
Enterprise Applications - Admin	Brainstorming Room	Changing how we manage projects agency wide - introducing Masterworks EPM	Massimo Scicali, EA Platform Leader	9:25 Am to 9:35 AM	9:25 Am to 9:35 AM	9:25 Am to 9:35 AM	10:00 AM to 10:10 AM	10:00 AM to 10:10 AM	10:00 AM to 10:10 AM
Program Mgmt. Office	Base Camp	PMO Overview, Video Conferencing and LMS survey	Sarah Fontenot Hill, 2013 MAX Graduate, Lida Dosser Kirby - Project Manager	9:40 AM to 9:50 AM	9:40 AM to 9:50 AM	9:40 AM to 9:50 AM	9:05 Am to 9:15 AM	9:05 Am to 9:35 AM	9:05 Am to 9:35 AM
Intelligent Transportation Systems	Base Camp	The change Transit faces with autonomous vehicles	Abed Abukar, Head of ITS	9:50 AM to 10:00 AM	9:50 AM to 10:00 AM	9:50 AM to 10:00 AM	9:15 Am to 9:25 AM	9:15 Am to 9:25 AM	9:15 Am to 9:25 AM
Enterprise Architecture	Base Camp	Managing Cloud Services	Keith Andrews, Manager Enterprise Architecture	10:00 AM to 10:10 AM	10:00 AM to 10:10 AM	10:00 AM to 10:10 AM	9:25 Am to 9:35 AM	9:25 Am to 9:35 AM	9:25 Am to 9:35 AM
Intelligent Transportation Systems	Room 2311 & 2312	Demonstration of CAD/AVL and Gateway Systems	ITS Team: Bobby Butler - ITS PM, Mohammad Alam - Mgr. ITS, Tom Serdar - ITS PM	Q&A	Q&A	11:00 AM to 11:10 AM	10:45 AM to 10:55 AM	10:30 AM to 10:40 AM	10:15 AM to 10:25 AM
System Engineering	Conf Rm 4E	Data Center Infrastructure: storage and connectivity	Don Barber, Sr. Manager System Engineering	10:15 AM to 10:25 AM	10:30 AM to 10:40 AM	Q&A	11:00 AM to 11:10 AM	Q&A	10:45 AM to 10:55 AM
Client Services	Conf Rm 4D	Delivering 5 Star Service	Charles Record, Sr. Manager Client Services, Cynthia Garcia, System Administrator	10:30 AM to 10:40 AM	10:15 AM to 10:25 AM	Q&A	Q&A	10:45 AM to 10:55 AM	11:00 AM to 11:10 AM
Network Security	Conf Rm 4D	Security Tool Suite and Consolidation	Jeff Smith, Sr. Security Analyst and Kris Mendoza , Sr. Security Analyst	Q&A	11:00 AM to 11:10 AM	10:45 AM to 10:55 AM	Q&A	10:15 AM to 10:25 AM	10:30 AM to 10:40 AM
Network Engineering	Conf Rm 4A	Coming to a closet near you, the Agency Network Upgrade	Darrin Green, Manager IT - Network Engineering	10:45 AM to 10:55 AM	Q&A	10:15 AM to 10:25 AM	10:30 AM to 10:40 AM	11:00 AM to 11:10 AM	Q&A
Infrastructure Admin	Conf Rm 4B	How are we doing? Dashboard Reporting: Incidents, Problems, Change control	Kent Montee, Principal, Infrastructure Administration	11:00 AM to 11:10 AM	10:45 AM to 10:55 AM	10:30 AM to 10:40 AM	10:15 AM to 10:25 AM	Q&A	Q&A

Introduction to the Technology Teams

The principles of Enterprise Architecture apply to all organizations within DART.

Business Principles
- Technology decisions are made based on the best overall benefits for the Agency as a whole.
- The technology department collaborates with all organizational units to respond and adapt to business-driven changes with solutions that are fit for purpose.
- Opportunities for increasing efficiency, effectiveness, and quality can be identified and realized through simple and flexible business processes, supported and enabled by Technology.

Data Principles
Data and information are assets that are valuable to DART management, employees and customers, and are managed accordingly. They should be understood and valued as much as other organizational assets such as buildings, trains, busses, people or money.
- Data principles must acknowledge the distinction between public data and private data
- Data should be managed – stored, protected and exploited – according to its value
- Standardized and relatable data provides more value
- Each data element has a Trustee accountable for data quality
- Data that is made available must meet the following criteria
  - Findable
  - Accessible
  - Interoperable
  - Reusable

Application Principles
DART first seeks to drive more value from existing assets, then seeks solutions in the marketplace and only builds solutions for strategic advantage. Technology services and solutions comply with established standards, policies and best practices.

Technology Principles
Changes to hardware and software are only implemented to address changing business needs, protect the technology environment or restore production services. We use technology that is generally accepted in mainstream business and is supported by a vendor.

"It's fine to celebrate success but it is more important to heed the lessons of failure."
- Bill Gates, Co-founder of Microsoft

Enterprise Architecture Group:
- Translates DART business strategy and processes into well-defined future capabilities and technology plans to achieve DART's mission
- Has responsibility for the continual development, management, communication and governance of the DART Architecture
- Provides thought leadership and innovation with an emphasis on emerging technologies and industry innovation that drives profitability, productivity and efficiency
- Provides guidance on technical design alternatives, including build vs. buy decisions
- Assists with vetting of technologies and technology vendors

Client Services:

The Client Services team consist of three main areas: desktop support, system administration and help desk support.

Service Desk

This team responds to calls for assistance with workstation and network problems, installation of computer software, password resetting, login issues, printer setup, and help with all DART supported software.
The team is also responsible for triage of all incidents and service catalog requests to ensure proper distribution.

System Administration

The team performs a wide range of enterprise-level administrative responsibilities. The team is largely responsible for the health of the Agency servers and micro-computer systems.

Desktop Support

The team supports all computers, laptops, and mobile devices issued to DART employees as well as printers and audio-visual equipment located throughout DART's various locations.

Network Engineering

This area of IPS is responsible for the agency wide data and voice networks. The team specializes in design & setup of new networking systems and administration of the overall network. This includes support for the communications network for the agency and the management of the contracts for those systems.

Systems Engineering

The Systems Engineering team is responsible for the implementation and support of the DART server infrastructure for new systems and the ongoing server maintenance to provide a robust and stable infrastructure. The team also manages the contracts and vendor relationships for all infrastructure components.
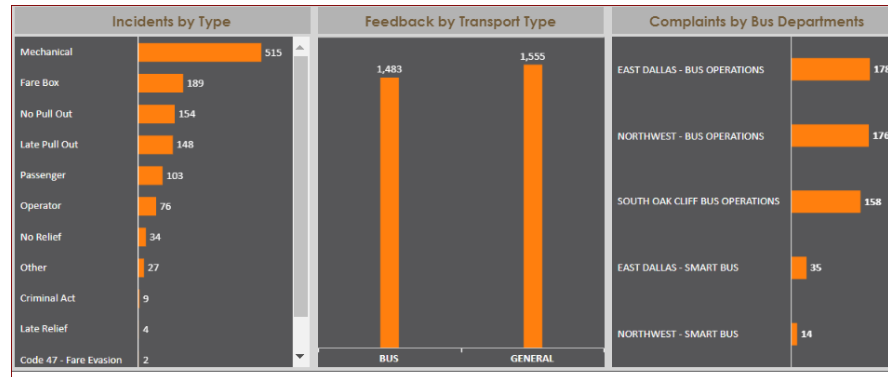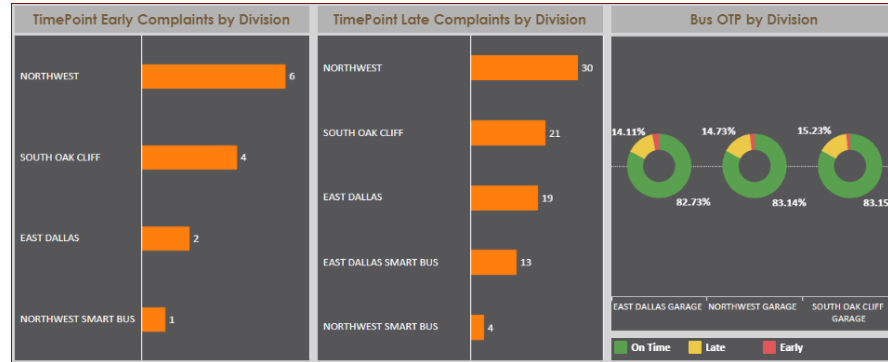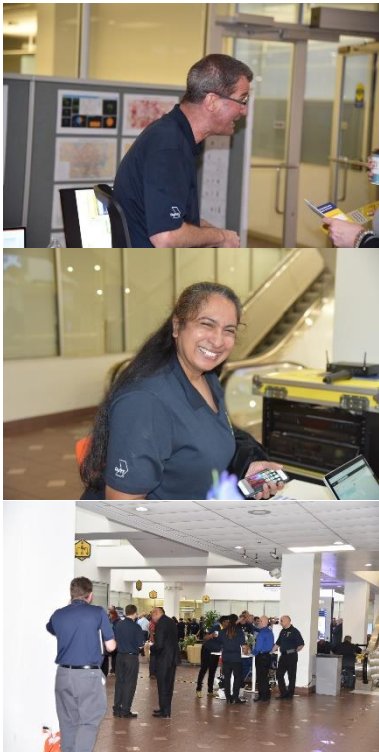
Infrastructure Platform Services (IPS):

Infrastructure Platform Services oversees data and voice networks, data storage, administrative computing infrastructure, application support, and service desk related issues. Fostering communication across these areas improves understanding of the shared infrastructure and facilitates DART-wide input on infrastructure complexities and problems, such as the need for minimum network standards.

IPS is not isolated to one area of DART's enterprise network consisting of the business ecosystem and operations. To share the responsibility and accountability for the seamless delivery of Beautiful Systems to DART, the IPS consists of four core areas: Infrastructure Administration, Client Services, Network Engineering, and Systems Engineering.

"We want to build technology that everybody loves using, and that affects everyone. We want to create beautiful, intuitive services and technologies that are so incredibly useful that people use them twice a day. Like they use a toothbrush. There aren't that many things people use twice a day." - Larry Page, co-founder Google

Operations Scorecards

TimePoint Early Complaints by Division

Division	
NORTHWEST	6
SOUTH OAK CLIFF	4
EAST DALLAS	2
NORTHWEST SMART BUS	1

TimePoint Late Complaints by Division

Division	
NORTHWEST	30
SOUTH OAK CLIFF	21
EAST DALLAS	19
EAST DALLAS SMART BUS	13
NORTHWEST SMART BUS	4

Bus OTP by Division

	EAST DALLAS GARAGE	NORTHWEST GARAGE	SOUTH OAK CLIFF GARAGE
Early	14.11%	14.73%	15.23%
On Time	82.73%	83.14%	83.15%

On Time   Late   Early

Incidents by Type

Type	
Mechanical	515
Fare Box	189
No Pull Out	154
Late Pull Out	148
Passenger	103
Operator	76
No Relief	34
Other	27
Criminal Act	9
Late Relief	4
Code 47 - Fare Evasion	2

Feedback by Transport Type

BUS	GENERAL
1,483	1,555

Complaints by Bus Departments

Department	
EAST DALLAS - BUS OPERATIONS	178
NORTHWEST - BUS OPERATIONS	176
SOUTH OAK CLIFF BUS OPERATIONS	158
EAST DALLAS - SMART BUS	35
NORTHWEST - SMART BUS	14

Information Management & Data Analytics (IMA)

The Information Management & Analytics division offers information management, business intelligence, advanced analytics, database management and Geographical Information solutions, all under one umbrella. Our vision is to make DART a data-driven organization. Our expertise in domain, technology and execution, empowers us to transform insights into foresights, collaborating with our customers at every step to answer the unasked questions.

We help users design, build and run insight driven applications by helping to maximize the potential of data and analytics by delivering operational excellence.

The GIS (Geographic Information Systems) team's primary mission is to support departments at DART on projects with clear and effective maps, geospatial analysis and other solutions GIS builds Web-Map based applications, that provide distinct map layers for different types of information, which helps business units make business critical decisions.

"Keep going forward because success will come"
  - Cassandra Sanford, CEO Kelly Mitchell Group

Line of Business Applications in use at DART or coming soon

Enterprise Asset Management | Enterprise Project Management

Enterprise Applications (EA)

EA provides maintenance and support for DART's enterprise systems and several dedicated applications used across the various business towers.

The application development team provides custom web, mobile and desktop computing solutions in support of agency goals and business processes and is responsible for the ongoing maintenance and support of DART's intranet (InfoStation), as well as DART's public website, DART.org.

The application development team also provides integration solutions for our enterprise applications Lawson (Finance, Procurement, Human Capital), Spear (Bus and Rail Operations, Materials Management) , Trapeze (Bus and Rail Operations, Planning and Scheduling, Customer Service) and other enterprise platforms as needed.

EA supports DART in all Technology needs by providing Customer Relationship Managers (CRM), the CRM functions as the primary contact for all projects and service requests.

"You can't just ask customers what they want and then try to give that to them. By the time you get it built, they'll want something new."

– Steve Jobs

Striving to standardize and implement best practices

PROJECT CENTRE

Project Name	State	Sponsor	Enterprise Project Name	Department
(All)	Completed	(All)	(All)	Technology

Project Name	% Complete	% Work Completed	Start	Finish	State	Owner	Sponsor	Total Est. Costs	Total Act.Costs	Impact Departments	Department	Group	Sched.Health
453 - 2017 - Database Administration Maintenance	100.00%	100.00%	24-Oct-2016	10-Jun-2020	Completed	Ambrosius Bekti	Nicole Fontayne-...	$700,890	$700,890	Technology	Technology	Technology.Information Management and Ana...	
453 - 2018 - Data Warehouse Maintenance	100.00%	100.00%	02-Oct-2017	24-Apr-2020	Completed	Phanindra Pydimarri	Nicole Fontayne-...	$168,098	$168,098	All	Technology	Technology.Information Management and Ana...	
461 - 2016 - Maintenance Projects	100.00%	100.00%	01-Oct-2016	19-Feb-2020	Completed	Charles Record	Nicole Fontayne-...	$1,917,921	$903,852	All	Technology	Technology.Client Services; System Admin; an...	
457 - FY2018 - EA Maintenance	27.00%	13.00%	02-Oct-2017	26-Nov-2019	Completed	Keith Andrews	Nicole Fontayne-...	$2,967,978	$360,396	Technology	Technology	Technology.Enterprise Architecture	
452 - 2018 - Trapeze Application Upgrade	100.00%	100.00%	01-Feb-2018	04-Oct-2019	Completed	Bonita Tan	Julius Smith	$465,903	$463,513	All	Technology	Technology.Customer Advocacy Service Delive...	
455 - 2015 - DART Comprehensive Payments System	100.00%	100.00%	01-Jun-2015	29-Jun-2019	Completed	Stephanie Schuchert	Joseph Costello	$29,439,651	$1,278,691	All, External Customer	Technology	Technology.Customer Advocacy RPD; Finance; ...	
451 - 2017 - New Service Catalog via Service Now	99.00%	99.00%	12-Jun-2017	28-Jun-2019	Completed	Ray Garton	Nicole Fontayne-...	$149,626	$50,580	All	Technology	Technology.Enterprise Applications	
453 - 2018 - EDW-Police (DART Police)	79.00%	91.00%	01-Oct-2018	01-May-2019	Completed	Alan Gorman	Nicole Fontayne-...	$132,961	$4,937	DART Police, Technology	Technology	Technology.Information Management and Ana...	🔴
453 - 2018 - EDW-FIN (Finance)	100.00%	100.00%	20-Aug-2018	05-Apr-2019	Completed	Brian Reed	Nicole Fontayne-...	$75,931	$4,431	Finance, Technology	Technology	Technology.Information Management and Ana...	
453 - 2018 - EDW-HC (Human Capital)	100.00%	100.00%	26-Mar-2018	05-Apr-2019	Completed	Brian Reed	Nicole Fontayne-...	$134,496	$14,069	Human Capital, Technol...	Technology	Technology.Information Management and Ana...	
451 - 2018 - Security Operations in ServiceNow	100.00%	100.00%	11-May-2018	15-Mar-2019	Completed	Ray Garton	Julius Smith	$58,837	$5,141	All	Technology	Technology.Enterprise Applications	
462 - 2016 - SE - Backup Transformation	100.00%	100.00%	16-Mar-2018	05-Feb-2019	Completed	Henry Bezanson	Nicole Fontayne-...	$323,950	$9,881	Technology	Technology	Technology.Systems Engineering	🟡
454 - 2018 - EDI 834 Deployment - Delta Dental & EyeMed	100.00%	100.00%	19-Mar-2018	11-Jan-2019	Completed	Terrih-Angelah Tur...	Cheryl Orr	$23,949	$23,949	Human Capital	Technology	Technology.Customer Advocacy RPD; Finance;	
463 - 2018 - PMP Certification Training (PMBOK 6th Editio...	100.00%	100.00%	21-May-2018	03-Jan-2019	Completed	Lida Kirby	Nicole Fontayne-...	$18,388	$17,015	Technology	Technology	Technology.Program Management Office and ...	🔴
458 - 2018 - ITS IVC,VBS,TSP Maintenance	100.00%	100.00%	02-Oct-2017	30-Dec-2018	Completed	Mohammad Alam	Julius Smith	$486,528	$486,528	All	Technology	Technology.Intelligent Transportation Systems	
454 - 2017 - Lawson Security Strengthening Phase I (AVAA...	100.00%	100.00%	09-Jan-2017	27-Dec-2018	Completed	Terrih-Angelah Tur...	Nicole Fontayne-...	$125,902	$75,352	Finance, Human Capital,	Technology	Technology.Customer Advocacy RPD; Finance;	
454 - 2018 - FY2018 Lawson Maintenance Tasks	100.00%	100.00%	14-Apr-2017	21-Dec-2018	Completed	Terrih-Angelah Tur...	Nicole Fontayne-...	$378,203	$378,203	All	Technology	Technology.Customer Advocacy RPD; Finance;	
455 - 2018 - Enterprise Application Delivery Non-ERP Main...	100.00%	100.00%	28-Sep-2017	21-Dec-2018	Completed	Shareem Taylor	Nicole Fontayne-...	$717,397	$812,818	Board Support, Commut...	Technology	Technology.Customer Advocacy RPD; Finance;	
462 - 2018 - SE - Maintenance Project	100.00%	100.00%	09-Oct-2017	07-Dec-2018	Completed	Don Barber	Nicole Fontayne-...	$6,661,088	$6,661,088	All	Technology	Technology.Systems Engineering	
454 - 2018 - Intellias Benefits Addin	100.00%	100.00%	24-May-2018	06-Dec-2018	Completed	Terrih-Angelah Tur...	Cheryl Orr	$146,284	$41,284	Human Capital	Technology	Technology	
458 - 2017 - In-Vehicle Mobile Gateway Router Upgrade	99.00%	100.00%	01-Jun-2017	01-Dec-2018	Completed	Mohammad Alam	Darryl Spencer	$3,121,520	$221,520	Bus, Finance, Technology	Technology	Technology.Intelligent Transportation Systems	🔴
454 - 2018 - RTM Tool Install - Maintenance	100.00%	100.00%	14-May-2018	29-Nov-2018	Completed	Terrih-Angelah Tur...	Nicole Fontayne-...	$3,464	$3,374	Technology	Technology	Technology	

Program Management Office

The PMO within the Technology department is considered a localized ITPMO. They are responsible for Technology projects only. The mission of the PMO is to provide a department-wide approach to identify, prioritize and successfully execute portfolio initiatives and projects that are aligned with the agency goals.

The PMO reinforces project delivery by ensuring that all business change is managed in a controlled way. The team is focused on:

- managing projects for the department as a portfolio providing a complete picture to management
- Resource planning and capacity forecasting for the portfolio providing management with the ability to see the gaps for future projects
- Improving stakeholder satisfaction
- Implementing standard practices
- Delivery support, making it easy for project teams to do their jobs by reducing bureaucracy, providing training, business analysis, project management, and financial guidance.
- Reporting on financial information, administering the department's budget and financial performance.
- Training on applications and systems as required

"Growth and comfort do not coexist."
- Ginni Rometty, CEO of IBM

According to ABI Research, MaaS will have a "disruptive impact on traditional transportation modes like car ownership, buses, trains, aviation, taxis and rental cars.

While artificial intelligence and route optimization are already at work at Google, Uber, and others, IoT in mass transit is in a nascent phase. Both AI and IoT will become much more widespread in the transportation sector in the next 2–3 years, with IoT accelerating its adoption rate even faster.

This idea is being tested around the world and relies heavily on IoT technology. MaaS needs real-time vehicle connectivity and artificial intelligence to plan trips, optimize routes, and shorten travel times. Without knowing each vehicle's precise location and status, in addition to other data, such as traffic and maintenance information, usability of MaaS will suffer.

The mobility algorithm will calculate the most appropriate travel option from the user's location to the destination and provide the optimal combination of transportation types. MaaS future isn't without caveats. Public transportation, often has complicated cost structures that may make it difficult to figure out which part of the total fee should be attributed to each of the types of transportation used in a journey.

Public mass transit can also be slow to adopt new technologies—and all that can hinder the development of MaaS. Nonetheless, public sector is the backbone of MaaS solutions, which will get people out of private cars into shared transportation mode and benefit economic activity by lowering transportation costs.

Intelligent Transportation Systems

Systems for improved safety and responsiveness.

The team implements, manages and maintains in-vehicle communication systems, passenger communications, LRT traffic signal priority system, and vehicle business system, while adding value to the business operational needs.

The ITS team enables DART business units to research new ITS technologies in the areas of Internet of Things (IoT), Automated and Connected vehicle technologies and their impact on transit business.

In addition, ITS team complies with ITS Regional and National Architecture in the deployment of DART ITS Projects including the Safety and Security guidelines.

"If you don't innovate fast, disrupt your industry, disrupt yourself, you'll be left behind."
- John Chambers, CEO of Cisco

What is Cyber Security?

- The **protection** of information and its critical elements, including systems and hardware that use, store, and transmit that information
- Necessary tools: policy, **awareness, training, education, technology**

Common Threats:

Viruses

Spyware

Weak passwords

Social Engineering

Network Security Operations (NSO)

The NSO provides security for DART's enterprise network business ecosystem. The NSO team supports the overall vision and mission of DART by enhancing its cybersecurity posture. They are entrusted to identify, protect, and detect any malicious activity against DART's enterprise network.

"Security is Everyone's Responsibility"

Q: Why was I hacked? I had active anti-malware protection!

A: "If you think technology can solve your security problems, then you don't understand the problems and you don't understand the technology."
– Bruce Schneier

A: "Hoaxes use weaknesses in human behavior to ensure they are replicated and distributed. In other words, hoaxes prey on the Human Operating System."
– Stewart Kirkpatrick