



**Improve Reliability — Measure the Results**

**EXACTER® OUTAGE-AVOIDANCE SYSTEM**

**Using EXACTER in a Strategic Preventive Maintenance Program**

Data from EXACTER includes a Group Maintenance Merit® rating to assist in selecting those points that are critical for preventive maintenance action. However, there are items on the electrical system that are critical for review as an emission source regardless of severity level due to their nature within the distribution network. Switches, reclosers, line regulators, and others all play a key role in maintaining reliability and customer relations.

The following methodology is a best practices approach to strategically respond to equipment problems with preventive maintenance.

**Step One:**

- a) Choose CRITICAL circuits within your territory – feeder lines, areas near substations and power generation facilities (if applicable) or otherwise critical to your reliability.
- b) Exacter will create a schedule to repeatedly survey these circuits 4-6 different days over a 30-day period.

**Step Two:**

Genics will survey with EXACTER unit(s) in a survey vehicle(s), the system to gather group data.



*EXACTER-EXT Unit*



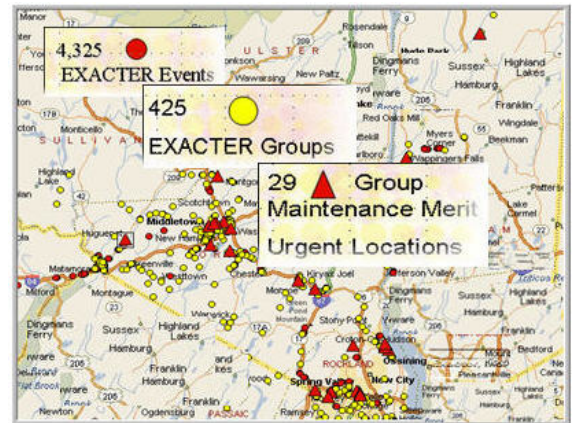
*Seat Back Storage*



*Roof Mount Antenna Array*

**Step Three:**

Using information provided by Exacter, Genics will be able to view a listing of the most severe areas that require service based on EXACTER Group Maintenance Merit®. The locations will be ranked in descending order of severity and can be imported into a GIS system, if desired. A map and detailed coordinates will be provided to the utility and Genics to implement step 4 and 5.





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**Step Four (optional):**

Import the EXACTER data into your company GIS and plot the maintenance data on your wires and facilities.

Maintenance Priority Ranking

Can be used as an internal designator for tracking purposes			First time an event was recorded at this location within the past 60 days	Last time this location was passed	No. of times EXACTER records a signal	No. of times EXACTER passed the same location during the time period listed here	Percentage of passes where an event occurred	Measure of severity (0-10)
Group	Latitude	Longitude	Initial Event Date	Last Pass Date	# of Events	# of Passes	Persistence	GMM
1	40.121960	-83.033570	12/23/2007	2/15/2008	6	6	100%	7.74
4	40.122960	-83.034570	1/3/2008	2/15/2008	6	6	100%	5.94
2	40.123960	-83.035570	1/3/2008	2/15/2008	5	5	100%	5.91
3	40.124960	-83.036570	1/24/2008	2/14/2008	3	4	75%	5.63
Temp	40.126960	-83.038570	1/8/2008	2/14/2008	4	6	67%	4.54
Temp	40.127960	-83.039570	1/24/2008	2/14/2008	5	11	45%	4.44
Temp	40.128960	-83.040570	1/15/2008	2/15/2008	6	9	67%	4.22
Temp	40.129960	-83.041570	1/8/2008	2/18/2008	6	16	38%	3.22

**Step Five:**

Genics trained technicians will visit the critical facilities that have been located with EXACTER as a failure emission source and locate the failing equipment with handheld tools.



Model M330 Mini RFI Locator



Model 250 Parabolic Pinpointer

**Step Six:**

Utility dispatch maintenance crews to repair the critical equipment before the outage occurs.

Photos courtesy of Radar Engineers

