A powerful tool for call-centers and field technicians

DSL service providers make large investments in call-center operations and field technician organizations so they can be responsive to customer calls while maintaining a high-quality network. When a customer experiences a technical problem, agents and technicians are the most important company representatives. The information that they provide to the customer, and the actions that they take are crucial for achieving a high level of customer satisfaction.

The behind-the-scenes processes that these groups use must be designed to minimize the chance of a human interpretation error or miscommunication. They need a tool that can guide them by providing accurate technical recommendations of prompt actions required to properly correct issues on the line.

To support efficient customer service response, ASSIA DSL Expresse offers ClearView, a sophisticated recommendation engine designed to improve the productivity of call-center agents and field technicians by providing them with an accurate and concise analysis of the problem faced by the caller, and suggesting appropriate next steps to resolve the issue.

The right answers immediately

Since ASSIA DSL Expresse Performance Evaluation is non-disruptive, diagnostics can be performed at any time without having to interrupt the customer’s service.

Furthermore, the tool is available to the entire technical staff for the same cost; challenging tradeoffs between customer satisfaction and network diagnostics expenses are no longer necessary.

Call-center operations face many challenges. A call-center agent has very limited time to retrieve data, which is often in multiple systems, to analyze the often cryptic information, and to make a decision on the necessary action. In many cases, the agent needs to identify whether the customer problem is indeed related to the DSL connection or due to some other cause. Once the problem is identified, the agent has to determine whether it can be addressed remotely—all while under the scrutiny and pressure of a frustrated customer. These decisions have a large direct impact on operational expenses and potentially a larger impact on customer satisfaction and churn rates.

Figure 1 illustrates how the agent’s decision affects the technician dispatch effectiveness. The false positive area (lower right pink square) corresponds to cases when a dispatch is triggered unnecessarily, and resources are consequently wasted. The false negative area (upper left pink square) corresponds to cases when a dispatch is not authorized, although it would have addressed the customer’s problem.

Using specially designed algorithms, ClearView distills multiple types of data, such as DSL operational and performance data collected by DSL Expresse, to produce simple and accurate recommendations that include:

- **Dispatch a technician.** There is a physical-layer issue that cannot be corrected by profile optimization. The best option for resolution is to dispatch a technician.
- **Check for missing micro-filter.** The physical-layer issue appears to be a missing micro-filter. Provide guidance to the customer to self-install the micro-filter.
- **No immediate action is needed.** There is a physical-layer issue that has been identified by DSL Expresse, and profile optimization is already

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**TABLE 1.** Action required versus action taken matrix

<table>
<thead>
<tr>
<th></th>
<th>Dispatch</th>
<th>No Dispatch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action Required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>False Negative</td>
<td>- No Dispatch</td>
<td>- Incorrect Action</td>
</tr>
<tr>
<td>True Positive</td>
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**Figure 1.** Action required versus action taken matrix
in progress. There is confidence that the profile optimization will correct the issue, and a technician dispatch is not necessary.

- **Run real-time profile optimization.** There is a physical-layer issue, but there is confidence that the issue can be corrected by profile optimization, and a technician dispatch is not necessary.

- **No DSL physical-layer issue is detected.** Look for other causes of problem. DSL technician dispatch is not necessary.

ClearView also delivers additional information:

- **Detailed guidance for the field technician,** when a dispatch is recommended. This guidance includes:
  - Explanation of the high-level recommended fix action.
  - Directions for fixing up to two identified faults.

- **Clear explanation of the conditions on the line,** appropriate for more experienced call-center agents, or field technicians. The explanation covers the following:
  - Status of the line’s data rate relative to the purchased service product.
  - Status of the line’s maximum data rate relative to similar lines in the network.
  - Status of the line’s stability over the last 24 hours and over the last 7 days.
  - Consistency of the line’s profile configuration with the purchased service product.
  - Status of profile optimization activities by DSL Expresse.
  - Status of diagnostics faults identified by DSL Expresse.

This rich set of recommendations from ClearView offers immediate benefits for call-center operations. By recommending a technician dispatch only when necessary, ClearView greatly reduces unproductive “truck rolls” (false-positives), and gives a fast solution to the customer’s problem – for example through real-time optimization, or by asking the customer to install a missing micro-filter. By correctly identifying the cases when a dispatch is needed, ClearView also decreases the false-negatives, when a technician would indeed be the best option for solving the problem, yet the decision for dispatch is not made.

**Maximize field productivity**

Field technicians are confronted with multiple challenges. They use data from multiple tools to isolate and identify and have to identify the location of the fault quickly. Their tasks become even more complicated when the problem is occurring only intermittently. And in some cases, there are multiple faults contributing to the service degradation, and technicians must correct all of them before declaring the work complete.

ClearView gives field technicians the accurate guidance that they need for each line to fix the problem at once. A dispatch recommendation for a line comes with directions for fixing up to two faults present on the line. The recommendation can also include location information, such as identifying when the fault is originating in the outside plant and is affecting multiple lines.

In addition, ClearView verifies whether the field technician has fixed all faults and if issues remain, ClearView instructs the technician on how to correct the remaining faults. By providing this single source of truth to both the inside and outside teams, ClearView determines whether the situation has been appropriately resolved.

**Intuitive UI with actionable data**

DSL Expresse supports multiple interfaces for delivering the ClearView outputs:

- Call-center agents and field-technicians equipped with internet connected devices can access ClearView through a Web interface. A screenshot of the GUI is shown in figure 2.

- Service Provider IT teams can integrate ClearView recommendations into their own tools by leveraging the DSL Expresse Northbound API.

- Field-technician organizations also can rely on Expresse Pro, the ASSIA mobile application designed to access DSL Expresse through smart-phones and tablets while on the go. Expresse Pro provides real-time recommended actions produced by ClearView, and is designed to be always on and easily used by technicians in the field, without requiring any specific DSL expertise.