



Materials Information Tracking System / Producer Lab Analysis and Information Detail (MITS/PLAID)

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MITIS/PLAID

- **What is MITIS/PLAID?**
- **Purpose**
- **Requirements**
- **Contacts**
- **Future**

What is MITS/PLAID

MITS & PLAID is...

- A centralized online database where Hot Mix Asphalt (HMA) & Central Mix Aggregate (CMA) job mixes and sample results are submitted and approved and
- Can be viewed by the Department and the Producer.

MITS: Materials Information Tracking System

- Department Side

PLAID: Producer Lab Analysis and Information Detail

- Producer Side

Purpose

"doveryai no proveryai" Reagan to Gorbachev



"You repeat that at every meeting" Gorbachev to Reagan

Purpose

“Trust but verify”

Purpose

Meet Federal Regulations - Sec. 637.207 Sampling and testing program.

- (ii) Quality control sampling and testing results may be used as part of the acceptance decision provided that:
 - (A) The sampling and testing has been performed by qualified laboratories and qualified sampling and testing personnel. – **Materials Cert Schools**
 - (B) The quality of the material has been validated by the verification testing and sampling. The verification sampling shall be performed on samples that are taken independently of the quality control samples. – **MITS/PLAID**
- (c) The quality control sampling and testing is evaluated by an Independent Assurance (IA) program. - **VDOT**

Purpose

- **Ability to monitor acceptance testing results and the quality assurance results, both for the Producer and Department.**
- **Saves time as all the information is in one place**
- **The Contractor can see VDOT QA test results**
- **Action can be taken immediately if a discrepancy is found between VDOT test results and Producer test results – close to real time monitoring**


MITTS

Allows VDOT personnel to:

- **Approve job mixes**
- **Enter QA testing data**
- **Enter project information**
- **See contractors submitted data**
- **Close out lots & projects**
- **Run lot adjustments**
- **Run comparison reports**

MITs – VDOT's View

Inside VDOT Materials
Business Center Materials



Materials Information Tracking System

Home
CMA Program
HMA Program
Administration
Help

Notification

Filter existing records by:
 Include Hidden Notifications
Notification Type: All

Notification Search Results (1709 found)

| Sent | Type | From | Message | Link | Hidden | Delete |
|--------------------|-------------|-----------|--|------------------------|--------------------------|--------------------------|
| 4/22/2013 9:20 AM | TL127 (CMA) | Automated | TL127 has been Submitted for Production Year: 2013 Part: Part B Apporval. Producer: VDOT Testing Producer Plant: Fake Plant VDOTJobMix: ContactorDesign: test contract | Recall | <input type="checkbox"/> | <input type="checkbox"/> |
| 4/19/2013 4:43 PM | Security | Automated | New Producer User has been Submitted for Approval, Producer = 97, User ID = tammun59@yahoo.com. | Recall | <input type="checkbox"/> | <input type="checkbox"/> |
| 4/17/2013 3:51 PM | TL127 (HMA) | Automated | TL127 has been Submitted for Production Year: 2013 Part: Part B Apporval. Producer: HMA Paving- Virginia, Inc. Plant: Richmond VDOTJobMix: 4044-13-12 ContactorDesign: 1312 | Recall | <input type="checkbox"/> | <input type="checkbox"/> |
| 4/17/2013 1:58 PM | Lot | Automated | Lot has been Completed. Producer: HMA Paving- Virginia, Inc. Plant: Richmond JobMix: 4044-13-12 | Recall | <input type="checkbox"/> | <input type="checkbox"/> |
| 4/17/2013 10:57 AM | TL50 | Automated | TL50 has been Certified. Producer: HMA Paving- Virginia, Inc. Plant: Richmond JobMix: 4044-13-12 | Recall | <input type="checkbox"/> | <input type="checkbox"/> |

First ... [11](#) [12](#) [13](#) [14](#) [15](#) [16](#) [17](#) [18](#) [19](#) [20](#) ... Last

[Excel Report](#)

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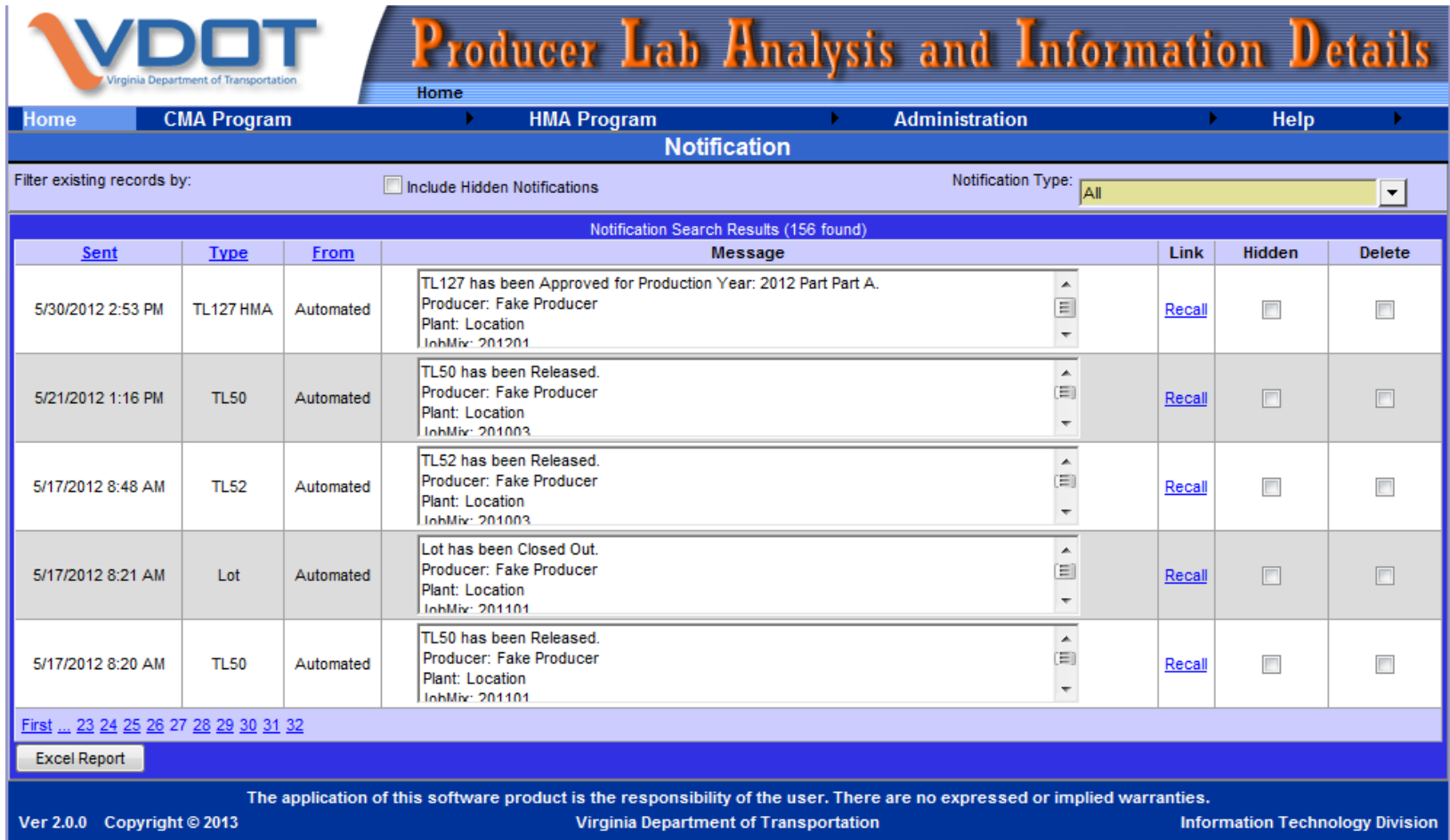
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Virginia Department of Transportation
Information Technology Division

PLAID

Allows producers to:

- **Submit job mixes**
- **Submit sample data, test results & tonnages**
- **See VDOT testing results**
- **Run a report of all their submitted data**

PLAID – Notifications the Producer gets



The screenshot shows the VDOT web application interface for "Producer Lab Analysis and Information Details". The page features a navigation menu with "Home", "CMA Program", "HMA Program", "Administration", and "Help". The main content area is titled "Notification" and includes a search filter section with options to "Include Hidden Notifications" and a "Notification Type" dropdown set to "All". Below this is a table of "Notification Search Results (156 found)".

| Sent | Type | From | Message | Link | Hidden | Delete |
|-------------------|-----------|-----------|--|------------------------|--------------------------|--------------------------|
| 5/30/2012 2:53 PM | TL127 HMA | Automated | TL127 has been Approved for Production Year: 2012 Part Part A. Producer: Fake Producer Plant: Location JobMix: 201201 | Recall | <input type="checkbox"/> | <input type="checkbox"/> |
| 5/21/2012 1:16 PM | TL50 | Automated | TL50 has been Released. Producer: Fake Producer Plant: Location JobMix: 201003 | Recall | <input type="checkbox"/> | <input type="checkbox"/> |
| 5/17/2012 8:48 AM | TL52 | Automated | TL52 has been Released. Producer: Fake Producer Plant: Location JobMix: 201003 | Recall | <input type="checkbox"/> | <input type="checkbox"/> |
| 5/17/2012 8:21 AM | Lot | Automated | Lot has been Closed Out. Producer: Fake Producer Plant: Location JobMix: 201101 | Recall | <input type="checkbox"/> | <input type="checkbox"/> |
| 5/17/2012 8:20 AM | TL50 | Automated | TL50 has been Released. Producer: Fake Producer Plant: Location JobMix: 201101 | Recall | <input type="checkbox"/> | <input type="checkbox"/> |

At the bottom of the table, there is a pagination control showing "First ... 23 24 25 26 27 28 29 30 31 32" and an "Excel Report" button. A footer contains the text: "The application of this software product is the responsibility of the user. There are no expressed or implied warranties. Ver 2.0.0 Copyright © 2013 Virginia Department of Transportation Information Technology Division".

Job Mix Form

Materials Information Tracking System

Home CMA Program HMA Program Administration Help

TL127 Job-Mix Formula

Submit to the District Administrator, Virginia Department of Transportation. Approval must be received by the contractor from the Materials Division before work is begun. This job-mix design is approved for all projects of the Department for the type of mix and the calendar year shown below.

| | | | |
|------------------------|--|-------------------------------|---|
| District: | <input type="text" value="RICHMOND"/> | Producer Name: | <input type="text" value="HMA Paving- Virginia, Inc."/> |
| Design Lab: | <input type="text" value="Select"/> | TSR Test Number: | <input type="text" value=""/> |
| Plant Name: | <input type="text" value="Richmond"/> | Plant Phone: | <input type="text" value=""/> |
| Job Mix Number: | <input type="text" value="511"/> | Contractor Design Mix Number: | <input type="text" value=""/> |
| Design Type: | <input type="text" value="Superpave"/> | Type Mix: | <input type="text" value="SM-12.5A"/> |
| Default Tests per Lot: | <input type="text" value="8"/> | | |

| Job-Mix Formula Materials (5 found) | | | | | | | |
|--|-------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Edit | Materials | Job Mix Phase | | Kind | Size | Producer | Source |
| | | A | B | Type | | | Plant |
| Edit | Aggregate | 0 % | 0 % | Granite | Unassigned | Martin Marietta | Rockville |
| Edit | Aggregate | 48 % | 48 % | Granite | 78 | Martin Marietta | Rockville |
| Edit | Aggregate | 17 % | 17 % | Sand | Sand | Luck Stone Corporation | Caroline |
| Edit | Aggregate | 35 % | 35 % | Screenings | #10 Screenings | Martin Marietta | Rockville |
| Edit | Asphalt Cement | | | PG 64-22 (SHRP) | | | |
| Add Clear | <input type="text" value="Select"/> | <input type="text" value=""/> | <input type="text" value=""/> | <input type="text" value=""/> | <input type="text" value=""/> | <input type="text" value=""/> | <input type="text" value=""/> |

| Job-Mix Formula Quality Control (6 found) | | | | | | | | | | |
|---|---------|---------------|---------------------|-----------------------|---|----------|----------|----------|-------------------|-------|
| Job-Mix Sieve | | Job Mix Phase | | Tolerance (+ or -) | Acceptance Range Average of (8) Test(s) | | | | Design/Spec Range | |
| English | Metric | Lab JMF A | Production JMF B | | MIN A | MAX A | MIN B | MAX B | MIN | MAX |
| 3/4in | 19mm | 100 % | 100 % | 0 % | 100 % | 100 % | 100 % | 100 % | 100 % | |
| 1/2in | 12.5mm | 97 % | 97 % | 2.8 % | 94.2 % | 99.8 % | 94.2 % | 99.8 % | 95 % | 100 % |
| 3/8in | 9.5mm | 89 % | 89 % | 2.8 % | 86.2 % | 91.8 % | 86.2 % | 91.8 % | | 90 % |
| #8 | 2.36mm | 42 % | 42 % | 2.8 % | 39.2 % | 44.8 % | 39.2 % | 44.8 % | 34 % | 50 % |
| #200 | 0.075mm | 5.0 % | 5.0 % | 0.7 % | 4.3 % | 5.7 % | 4.3 % | 5.7 % | 2 % | 10 % |
| Asphalt | A.C. | 5.60 % | 5.60 % | 0.21 % | 5.39 % | 5.81 % | 5.39 % | 5.81 % | | |
| Values Displayed from 'Tolerance' to 'Design/Spec Range' are based on current reference tables. | | | | | | | | | | |

| | | | | |
|----------------------|---------|--------------------------------|---------|--------------------------------|
| Rise(Gmm) | Part A: | <input type="text" value="0"/> | Part B: | <input type="text" value="0"/> |
| Compacted Unit Wt | Part A: | <input type="text" value=""/> | Part B: | <input type="text" value=""/> |
| Low Down Temperature | Low: | <input type="text" value=""/> | High: | <input type="text" value=""/> |

TL-50 Volumetrics

Acceptance AC & Gradation **Volumetrics** Volumetric AC & Gradation

Producer Values

Separate AC & Gradation: No Yes

Report Number: _____

Date Testing Complete:

Lab Tracking Number: _____

Rice(Gmm):

Average Specimen Height

@N_{air}:

@N_{Design}:

VDOT Values

Separate AC & Gradation: No Yes

Report Number: _____

Date Testing Complete:

Lab Tracking Number: _____

Rice(Gmm):

Average Specimen Height

@N_{air}:

@N_{Design}:

Volumetric Specimens (3 found)

| Specimen Number | Producer | | | VDOT | | |
|-----------------|---------------|-----------------|------------|---------------|-----------------|------------|
| | Mass In Air A | Mass In Water C | SSD Mass B | Mass In Air A | Mass In Water C | SSD Mass B |
| 1 | 4895.5 | 2835.8 | 4899.7 | 5250.5 | 3244.8 | 5253.6 |
| 2 | 4895.3 | 2830.0 | 4900.2 | 5250.8 | 3251.3 | 5253.1 |
| 3 | 4895.1 | 2824.2 | 4903.6 | 5249.5 | 3243.8 | 5252.4 |

Volumetric Properties

| Property | JMF | Producer | VDOT | Criteria | |
|-----------------------------|-----|----------|--------|----------|--------|
| | | | | Min | Max |
| %AC | | 5.28 % | 5.60 % | | |
| Rice (Gmm) | | 2.436 | 2.715 | | |
| Blinder Gravity (Gb) | | 1.03 | 1.03 | | |
| %Air Void (VTM) | | 3.0 % | 3.6 % | 2.0 % | 5.0 % |
| %VMA | | 14.9 % | 17.7 % | 13.0 % | |
| %VFA | | 80 % | 80 % | 64.0 % | 81.0 % |
| VCA _{mix} | | | | | |
| FA Ratio | | 0.94 | 2.71 | 0.60 | 1.20 |
| BULK (Gmb) | | 2.364 | 2.617 | | |
| Effective (Gse) | | 2.637 | 3.007 | | |
| Aggregate (Gsb) | | 2.632 | 3.002 | | |
| %Blinder Absorbed (Pba) | | 0.07 % | 0.06 % | | |
| Effective %Blinder (Pbe) | | 5.21 % | 5.54 % | | |
| %Density @ N _{air} | | 91.0 % | 86.3 % | | |
| Sample Pass/Fail | | Passed | Failed | | |

Field CF: 0.005

VCA_{DR}: _____

G_{se}: _____

Producer Remarks:

Requirements

Hot Mix Asphalt (HMA)

- The Contractor shall submit a job-mix formula for each mixture for approval through PLAID. Paper copies of the job mix formula along with supporting documentation shall also be submitted to the Department.
- The Contractor shall input such test results **within 24 hours of sampling** to the Department through PLAID, unless otherwise approved by the Materials Engineer.

Central Mix Aggregate (CMA):

- The Contractor shall submit, or shall have the source of supply submit a job-mix formula for each mixture for approval through PLAID prior to starting work.
- The Contractor shall provide test results determining grading, moisture and Atterberg limits **within 48 hours of sampling** to the Department through PLAID.

Requirements

Why is there a difference:

- **Different Programs**
 - **Different Specifications**
- **Different test methods/properties being reported.**
 - **Testing being done for asphalt should be completed within 24 hours**
 - **Aggregate testing can take up to 48 hours**

Issues

- **General Contractor Access to Information**
 - Producer provides access
 - Producer provides specific Job Mix Data
- **Merging companies**
- **Enforcement across districts**

Future

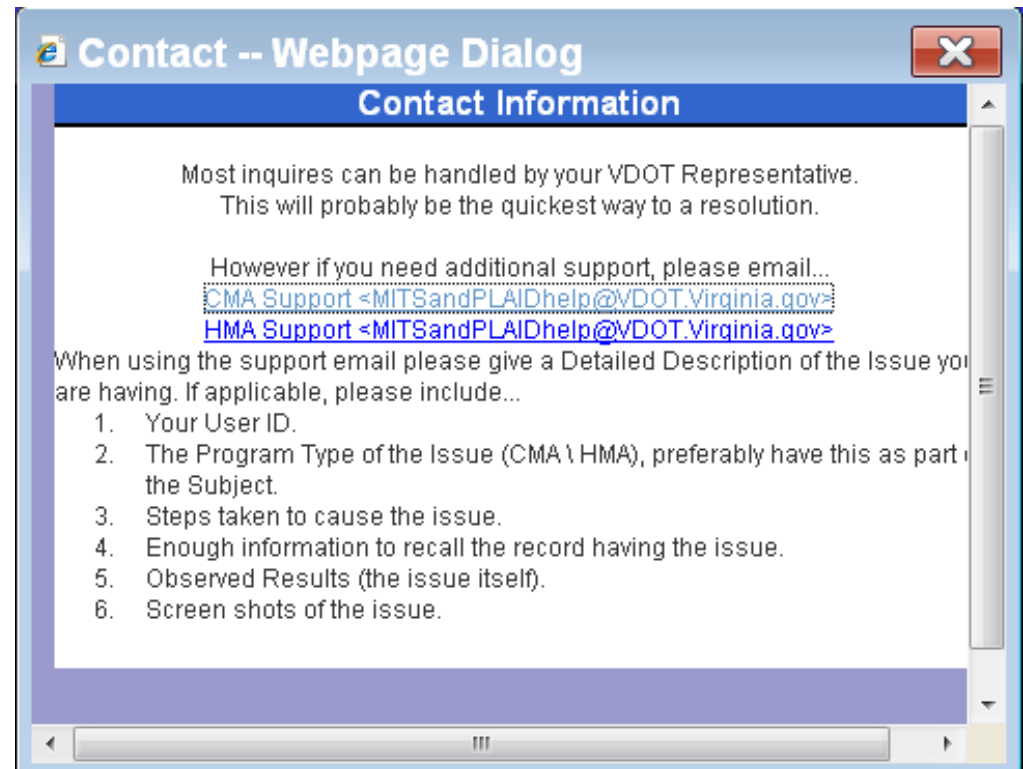
- **Add more report capabilities**
 - **Randomness histogram report**
- **Control Charts**
 - **Requirement nonetheless**
- **Monitor performance of job mix formula via a scorecard**
- **Generate notifications if report results are adverse**
- **Streamline processes for all districts to follow**

District Contacts

| District | HMA | CMA |
|-------------------|----------------|-----------------|
| Bristol | Brian Truelove | Ralph Davis |
| Salem | Clyde Landreth | Clyde Landreth |
| Lynchburg | Tim Karnes | John Dearling |
| Richmond | Doug Chappell | Anthony Sanchez |
| Hampton Roads | Jamie Collins | Bill Jenkins |
| Fredericksburg | Ron Jackson | Michael Whanger |
| Culpeper | David Routt | David Routt |
| Staunton | Pat Hydrick | Pat Hydrick |
| Northern Virginia | Ronnie Seale | Ronnie Seale |

Help

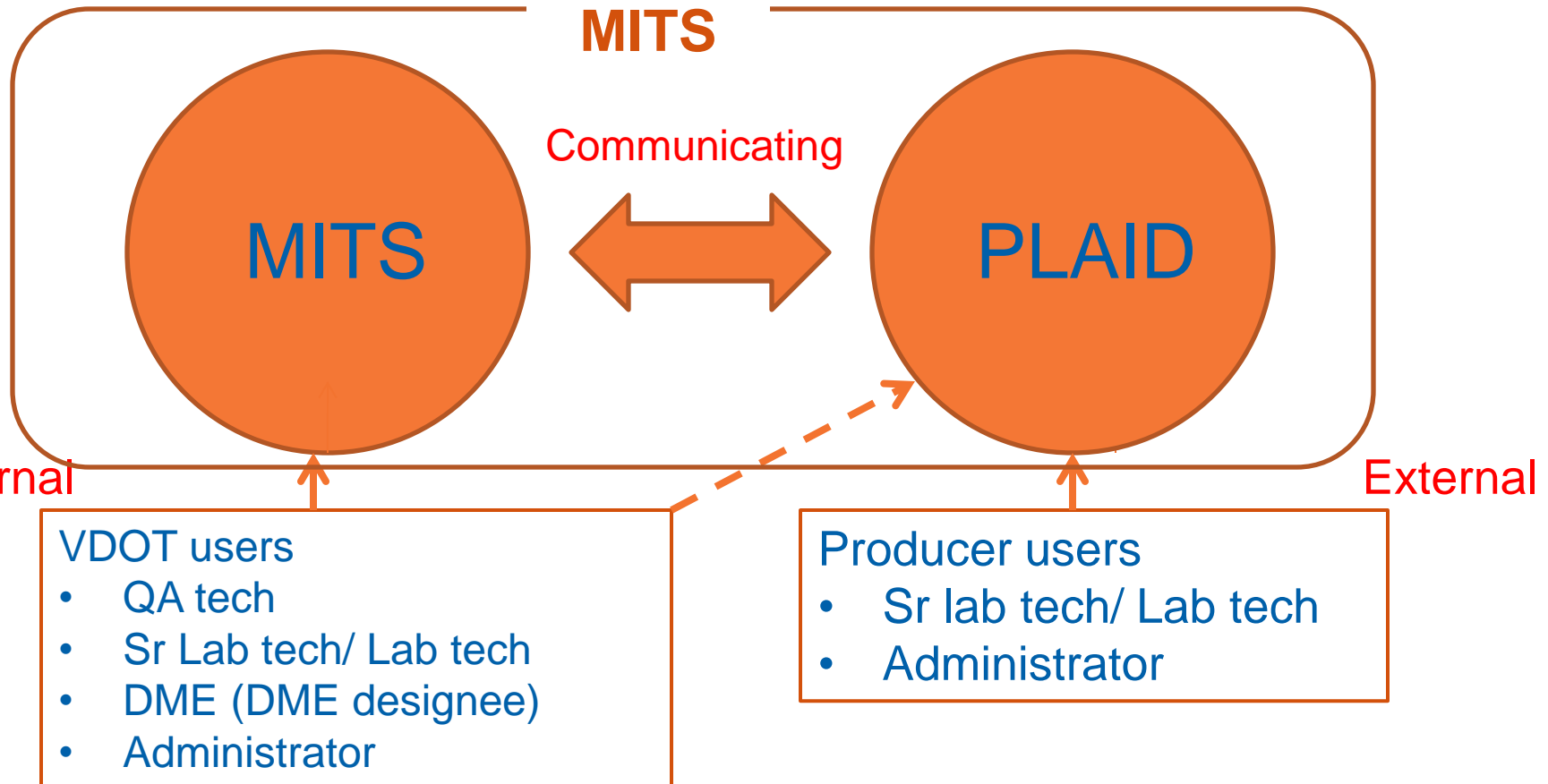
- Online Manual
- Printable Manual (in PDF format)
- Contact: MITSandPLAIDHelp@VDOT.Virginia.Gov
- HMA – Angela Beyke
- CMA – Wansoo Kim
- Franklin Stead
Developer



Summary

Via web portal the MITS enables:

- producer's tests for acceptance
- submitting/approving of Job Mix Formula
- sharing of data and reports



Questions?