



Digital Pen and Paper Solution
vCitePlus User's Guide



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Contents

Chapter 1		Getting Started
	3	Introduction
	3	System Components
Chapter 2		Digital Pen
	4	Equipment Description
	4	General Tips and Information
	5	Pen Lights
	5	Vibration Indicators
	5	Handwriting 101
Chapter 3		Digital Paper
	6	Digitized Dot Pattern Paper
Chapter 4		Cell Phones
	7	Cell Phones Overview
	7	<i>Motorola i580</i>
	7	Logging in
	8	Camera Phone
	8	Navigation Tips
	8	Technical Specs
	9	Motorola Renegade v950
	9	Logging in
	9	Camera Phone
	10	Navigation Tips
	10	Technical Specs
Chapter 5		Navigating the Web Portal
	11	How to Log-in
	11	Portal Capabilities
	16	Data Validation
Chapter 6		Tips and Troubleshooting
	17	Useful Tips

Chapter 1 – Getting Started





Introduction

vCitePlus is a “Digital Pen and Paper” (DPP) technology and a web-based platform which was developed specifically to address the unique needs of the public safety enforcement community. vCitePlus allows our clients to maintain the ease and flexibility of paper, while enjoying the benefits of digital capture. This simple-to-deploy system allows multiple types of citations – such as parking, moving, code enforcement, motorist assist, weed abatement, gang FIO (frisk, interrogate, observe), and fire inspection – to be written in the field while authorized personnel view, monitor, and analyze real-time data from any location. vCitePlus also utilizes an integrated camera phone which can be used to collect photographic evidence and GPS locations for all infractions.

Studies have shown that DPP technology is faster, more efficient, and more accurate than computer keyboard, tablet, or PDA entries. In addition, the vCitePlus Portal allows users to view, appeal and/or pay citations on-line in real-time, which often lead to increased collection rates, shorter citation cycle times, and decreased personnel time spent on payments and appeals.

System Components

To use the vCitePlus system, you will need:

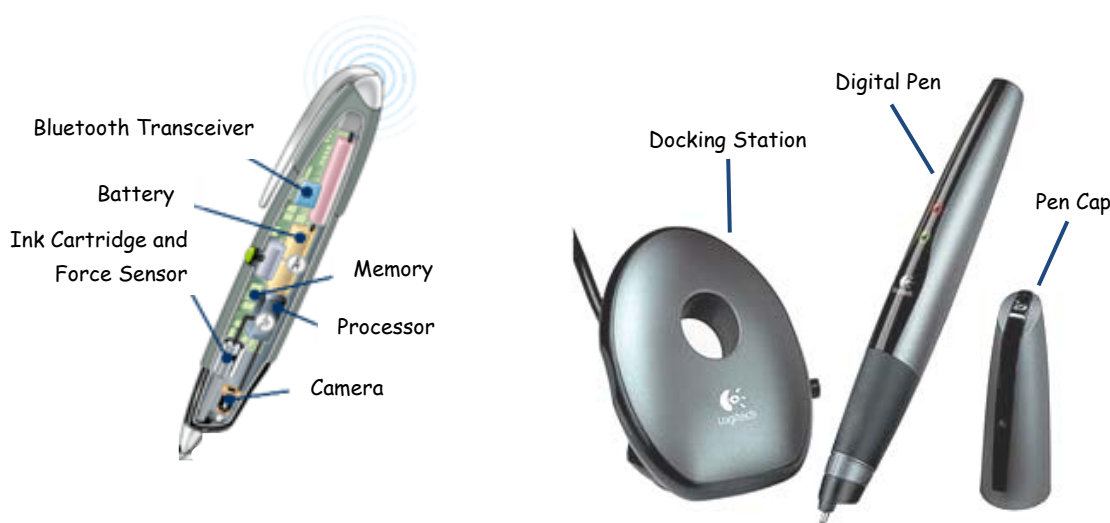
-  A digital pen and docking station
-  Digitized paper citations (engineered by Velosum)
-  A Velosum-approved cellular phone and/or docking station
-  A computer with internet access to view, interpret and analyze real-time data

Chapter 2 – Digital Pen

Equipment Description

At a glance, the vCitePlus digital pen looks – and writes – just like a traditional pen. However, as can be seen in the diagram below, the Digital Pen contains much more including:

- 🔌 Bluetooth transceiver
- 🔌 Rechargeable battery
- 🔌 Replaceable ink cartridge
- 🔌 Force sensor
- 🔌 2 MB of memory
- 🔌 Micro-processor
- 🔌 Camera
- 🔌 Docking station/charger



General Tips and Information

- 🔌 Each pen is equipped with a unique “pen id”, which identifies citations completed by each pen
- 🔌 Prior to use, each pen must be “paired” with a corresponding cellular phone. This process will be completed by Velosum prior to the shipping of equipment
- 🔌 Log into the phone before completing citations (for more information, refer to chapter 4)
- 🔌 Complete citations as you would with a regular pen
- 🔌 Mark the “SEND” box after completing EVERY citation (the “send” box is always located at the bottom right corner of the page. For additional information, refer to chapter 3)
- 🔌 The digital pen contains 2MB of memory, or the capacity to hold up to 600 full size pages of handwritten text
- 🔌 Stored data can either be transmitted to a cell phone or downloaded using the docking station
- 🔌 The Bluetooth transmission range is approximately 30 feet
- 🔌 Turn off your phone at least once a day
- 🔌 To recharge the pen, place it in the docking station for approximately one hour
- 🔌 If possible, never let your pen totally run out of power

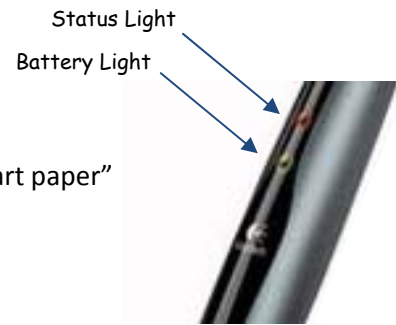
Pen Lights

☞ Status Light

- Blue (flashing) = Normal operation / ready for use
- Green = Pen is being used on “smart” paper
- Red = Communication error between pen and “smart paper”

☞ Battery Light

- Green = Go
- Orange = Less than half charge
- Red = Battery needs charging (if flashing, battery is *extremely* low)



Note: The red status light may appear periodically without disrupting the normal performance of the pen. If the problem persists, contact your system administrator and/or Velosum Customer Support.

Vibration Indicators

In addition to the lighting indicators mentioned above, the digital pen also communicates with users through a series of vibrations, which have various meanings. When in use, it is normal for the pen to vibrate periodically. The following chart describes the meaning of each vibration pattern.

# of Vibrations	Occurs When...	Indicates That The Pen Is...
ONE (SHORT)	The pen cap is removed	Ready to write
TWO	“Send” box is marked	Connecting to Bluetooth
THREE	Data has been sent	Disconnecting from Bluetooth
ONE (LONG) ¹	“Send” box is marked	Experiencing a Transmission Error

1 - In the event of one *long* vibration, try to fix the problem by marking the “send” box again. If the problem persists, contact your system administrator and/or Velosum Customer Support.

Handwriting 101

☞ Write legibly – if someone else can’t read it, neither can the software

☞ Do not retrace letters unless the pen buzzes while you are writing

☞ Be careful when writing the following letters: G, J, U

- G – Horizontal bar is needed to differentiate from “6” and “C”
- J – Don’t forget the “hook”, otherwise it can look like “T” or “I”
- U – Make it rounded to differentiate from “V”

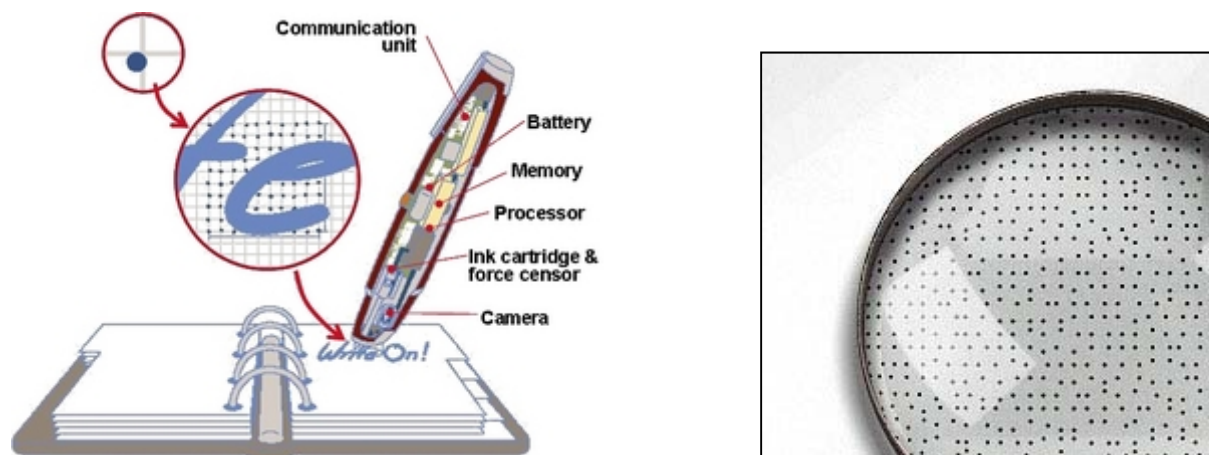
☞ Be careful when writing certain numbers

- No hash marks (0, 7)
- Square off the number “5” to differentiate from an “S” (same with “Z” and “2”)

Chapter 3 – Digital Paper

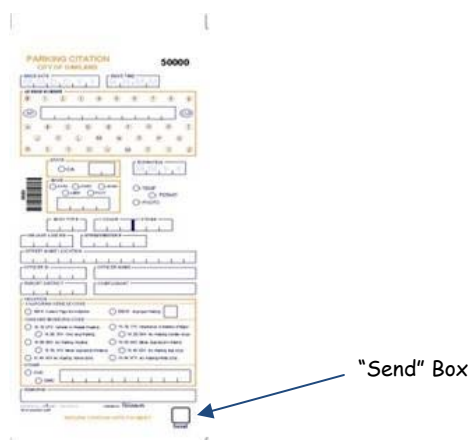
Digitized Dot Pattern Paper

At first glance, our paper looks like ordinary, everyday paper, but a closer examination reveals that it is much more. Each piece of paper is printed with a special, proprietary Anoto dot pattern which can be read by our digital pen. The dot pattern, which is nearly invisible to the naked eye, interacts with the digital pen, producing 50 photographs per second resulting in a precise rendering of the written data.



Upon completion of each citation, users can choose to transmit handwritten data from the pen into the vCitePlus Portal in one of two ways:

- 1) **Mark the "Send" Box** – By placing a check mark in this box (which is located in the bottom right-hand corner of the citation), the user initiates communication between our digital pen and the cell phone resulting in a Bluetooth transmission of all data stored within the digital pen.



- 2) **Insert Digital Pen into the Docking Station** – Users can also choose to transmit stored data from the digital pen to the portal by placing the pen into the docking station.

Note: Advanced set-up is required to transmit data via the docking station. Contact Velosum if you are interested in utilizing this transmission functionality.

Chapter 4 – Cell Phones

Cell Phones Overview

Cell phone technology is an important component of the vCitePlus system because it provides a convenient transmission mechanism (which avoids many complexities of IT integration) and because it does not require users to have access to computer hardware. To provide customers with greater flexibility and to maximize the performance of the overall vCitePlus system in various geographic regions, Velosum utilizes multiple cell phone models. vCitePlus is currently compatible with the following cellular phones:

- Motorola i580
- Motorola Renegade v950

Note that each phone must have special Velosum software installed in order to transmit data captured from digital pens. Operating instructions and features for commonly used cell models can be found below.

Motorola i580



Logging in

- 1 – Press the right soft key to view the Velosum log-in screen
- 2 – Press the right soft key to log in
- 3 – Enter username and password
- 4 – “You Have Logged in Successfully”

Camera Phone

- After marking the “Send” box on a paper citation, the “Time Out” function provides users 90 seconds to *begin* collecting photographic evidence of the infraction
- To take pictures of infractions, follow the process described below:
 - 1 – With the phone closed, “Time Out” countdown is displayed on the external display screen
 - 2 – Camera function starts when phone is opened
 - 3 – Press the right soft key to take photo
 - 4 – Press the left soft key to “use” photo or the right soft key to “retake” photo
 - 5 – Press the left soft key to identify that you are “done” taking photos
 - 6 – The screen will flash “processing citation” message until citation is processed
 - 7 – Confirmation page appears
- To change “Time-Out” settings, press the menu button, scroll to and select “User Settings”. The Time-Out settings govern the time required
- To take pictures after the “Time Out” countdown has expired – Check the “Send” box *again* on the citation and submit another version of the same citation. Please note that this must be done within a specific window of time. The default setting is 30 minutes, but this setting can be adjusted by the system administrator.

Navigation Tips

- Bluetooth transmission range between the digital pen and phone is approximately 30 feet
- Once logged in, all data will automatically be captured from the digital pen and transmitted via the Bluetooth technology in the phone (ie: no additional effort required by the user)
- In the event of intermittent cell reception, data will be stored until cell service is restored and all collected data will be automatically transmitted when “send” is marked on the next citation
- To view a list of all previously transmitted citations, press the menu button and scroll down to and select “Notification”
- To manually transmit unsend citations, press the menu button, scroll to and select “Storage”. If “files stored” has a number greater than zero, scroll to and select “start”.

Technical Specs – Motorola i580

Category	Description
Weight:	4.9 oz (139 g)
Dimensions:	3.68" x 2.2" x 1.2" (93 x 56 x 20.5 mm)
Battery:	Talk – 2.8 hours; Standby – 70 hours
Display Type:	LCD (Color TFT/TFD)
Display Colors:	262,144 (18-bit)
Resolution:	176 x 220 pixels
Languages:	English, French, Spanish
Bluetooth:	Supported Profiles: HSP, HFP, DUN, OPP, BPP version 1.2
Ruggedized:	MILSPEC 810f for dust, shock, vibration, and blowing rain

Motorola Renegade v950



Logging in

- 1 – Press the right soft key to view the Velosum log-in screen
- 2 – Press the right soft key to log in
- 3 – Enter username and password
- 4 – “You Have Logged in Successfully”

Camera Phone

- After marking the “Send” box on a paper citation, the “Time Out” function provides users 90 seconds to *begin* collecting photographic evidence of the infraction
- To take pictures of infractions, follow the process described below:
 - 1 – The phone must be OPEN to process citations
 - 2 – Camera turns on after the “Send” box is checked on the citation
 - 3 – Press the right soft key to take photo
 - 4 – Press the left soft key to “use” photo or the right soft key to “retake” photo
 - 5 – Press the left soft key to identify that you are “done” taking photos
 - 6 – The screen will flash “processing citation” message until citation is processed
 - 7 – Confirmation page appears
- To change “Time-Out” settings, press the menu button, scroll to and select “User Settings”. The Time-Out settings govern the time required
- To take pictures after the “Time Out” countdown has expired – Check the “Send” box *again* on the paper citation and submit another version of the same citation. This must be done within 30 minutes of the initial citation transmission.

Navigation Tips

- Bluetooth transmission range between the digital pen and phone is approximately 30 feet
- Once logged in, all data will automatically be captured from the digital pen and transmitted via the Bluetooth technology in the phone (ie: no additional effort required by the user)
- In the event of intermittent cell reception, data will be stored until cell service is restored and all collected data will be automatically transmitted when “send” is marked on the next citation
- To view a list of all previously transmitted citations, press the menu button (down arrow) and scroll down to and select “Notification”
- To manually transmit unsent citations, press the menu button, scroll to and select “Storage”. If “files stored” has a number greater than zero, scroll to and select “start”.

Technical Specs – Motorola Renegade v950

Category	Description
Weight:	4.2 oz (119 g)
Dimensions:	4.08" x 2.11" x 0.65" (104 x 54 x 16.5 mm)
Battery:	Talk time – 4.5 hours
Display Type:	LCD (Color TFT/TFD)
Display Colors:	65,536 (16-bit)
Resolution:	240 x 320 pixels (2.2" diagonal)
Languages:	English, French, Spanish
Bluetooth:	Supported Profiles: HSP, HFP, DUN, OPP, BPP version 1.2
Ruggedized:	MILSPEC 810f for dust, shock, vibration, and blowing rain

Chapter 5 – Navigating the Web Portal

How to Log-in

- Use your internet browser to navigate to the vCitePlus Portal (www.vshield.vciteplus.com)
- Enter your login-ID and password, both of which will be provided by Velosum

Login

Username:

Password:

[Forgot your Username?](#)
[Forgot your Password?](#)

Portal Capabilities

The vCitePlus Portal provides a multitude of value-added functionalities which allow our clients to benefit from the convenience and efficiency of real-time citation information and other settlement and reporting capabilities of the vCitePlus solution. From a technical standpoint, once the data is captured within the portal, a rendered PDF version of that citation is created and transmitted to designated stakeholders and simultaneously converted into a digitized, XML format for storage purposes. Stored data can then be downloaded or automatically migrated in any format to your server for data management and analysis.

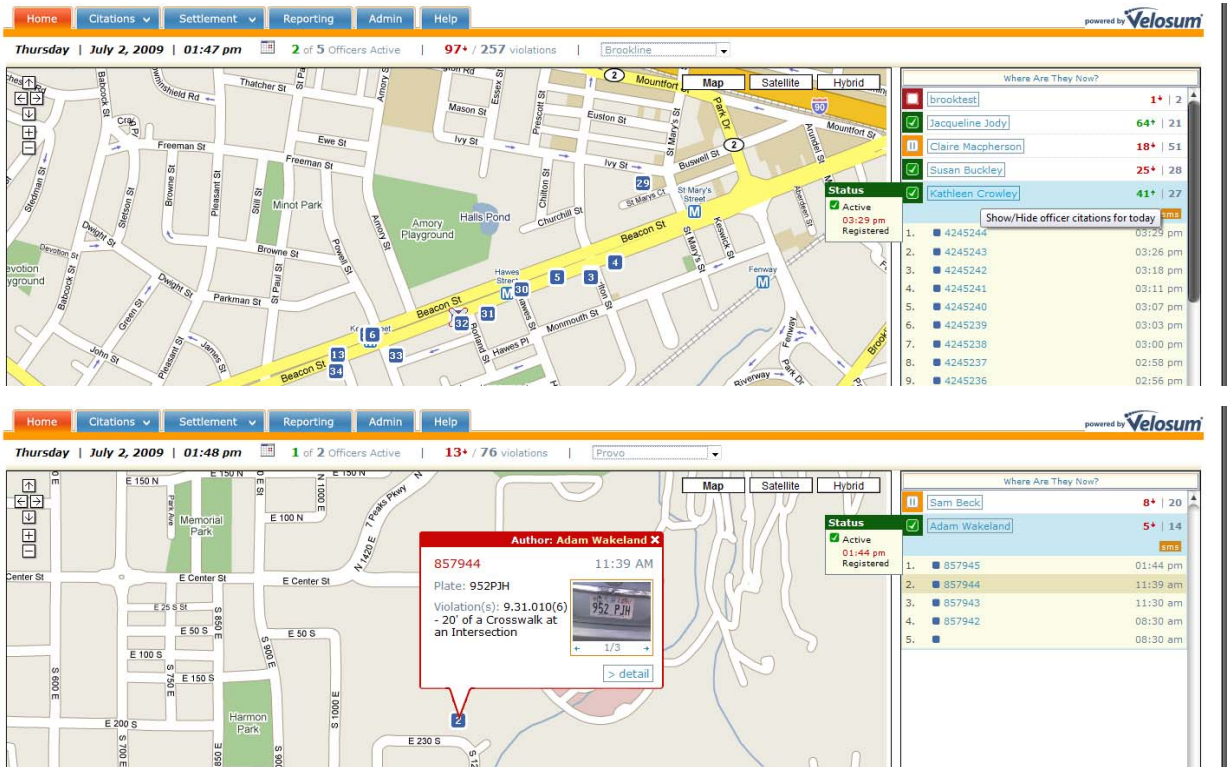
This section provides a preliminary introduction for each of the tools available within the vCitePlus Portal. For additional information regarding the Portal, please contact your Velosum sales representative.

Home

- Contains a map with the GPS location of each officer's last written citation
- The viewing window on the right side of the page contains a list of all officers. Next to each officer's name, portal users can view the number of citations written *today* (in green, red, or orange) and the number of citations written *yesterday* (in gray)
- Officer status – Indicates how long it has been since each officer's most recent citation. **Green** = less than 30 minutes, **Orange** = 31 minutes to two hours; **Red** = greater than two hours
- Click the calendar icon to view citation information for historical dates. Note that the Portal will default to the current date, unless directed otherwise.

Officer	Today	Yesterday
brooktest	1*	2
✓ Jacqueline Jody	63*	21
✗ Claire Macpherson	18*	51
✓ Susan Buckley	25*	28
✓ Kathleen Crowley	41*	27

- By clicking on an individual officer's name, portal users can view the location and time of all citations written by a particular officer that day. Use the calendar icon to view historical citation information for individual officers.
- Click on a specific citation number (on the map or in the list on the right) to view a pop-up window with additional citation details, including any photo evidence captured at the time of citation issuance
- To view a full-detail, rendered version of the citation, click on the "detail" link from within the citation pop-up window.



Citations

- The "Citation Manager" displays a searchable list of all citations given
- Citations can be sorted based on type of citation, citation number, status, author, issue date/time, or date/time the citation was uploaded to the portal
- Click on "Change Filter" to conduct an advanced search on any of the fields indicated above

The screenshot shows the Velosum portal interface for Citations. The navigation bar includes Home, Citations, Settlement, Reporting, Admin, and Help. The status bar indicates it is Thursday, July 2, 2009, at 1:52:24 PM, with 1 of 2 Officers Active and 13 / 76 violations. The table below lists the citations:

Customer	Type	ID	Status	Author	Issued	Received
Brookline	PARKING	4245243	Validated	kcrowley	7/2/2009 1:27:21 PM	7/2/2009 3:26:00 PM
Brookline	PARKING	4245242	Attention	kcrowley	7/2/2009 1:19:16 PM	7/2/2009 3:18:00 PM
Brookline	PARKING	4247560	Validated	jjoy	7/2/2009 1:15:40 PM	7/2/2009 3:15:00 PM
Brookline	PARKING	4247559	Validated	jjoy	7/2/2009 1:14:02 PM	7/2/2009 3:13:00 PM
Brookline	PARKING	4245241	Attention	kcrowley	7/2/2009 1:12:30 PM	7/2/2009 3:11:00 PM
Brookline	PARKING	4247558	Validated	jjoy	7/2/2009 1:10:09 PM	7/2/2009 3:09:00 PM
Brookline	PARKING	4245240	Validated	kcrowley	7/2/2009 1:08:33 PM	7/2/2009 3:07:00 PM
Brookline	PARKING	4243882	Validated	sbuckley	7/2/2009 1:06:22 PM	7/2/2009 3:05:00 PM
Brookline	PARKING	4245239	Validated	kcrowley	7/2/2009 1:04:44 PM	7/2/2009 3:03:00 PM
Brookline	PARKING	4245238	Validated	kcrowley	7/2/2009 1:04:12 PM	7/2/2009 3:00:00 PM

Settlement

- The Settlement tab of the vCitePlus Portal includes screens which can be used for 1) Account Lookups, 2) Payments, 3) Appeals, and 4) Demand Letters
- The Account Lookup screen can be used to search for accounts based on account number, citation number, or vehicle information
- For convenience, the viewing window shows a summary of recently searched accounts

Account Lookup

RECENT ACCOUNTS

06/30/09	00169342	CA - BEEDE
06/30/09	00168265	- TUANLE
06/30/09	00169988	CA - MYDAD
06/30/09	00169385	CA - TIFFANY

- After locating and clicking on a specific account number, portal users can view all account activity related to open violations, closed violations, or scheduled payments
- Additional information is available for any underlined items under the item description header

Account# 00154599

Vehicle

License Plate: WPL022 State: KS

Style: Make:

VIN: Model:

Year:

Pay: Select the violation(s) to be paid and click the Pay Now button.
To Appeal: Select the violation description link to view the violation detail.

Pay All	Citation	Status	Item Description	Item Date	Amount	Balance
<input type="checkbox"/>	857276	Unpaid	Registration/Plate Violation	5/7/2009	\$30.00	\$90.00
			Late Fee 1	5/25/2009	\$30.00	
			Late Fee 2	6/2/2009	\$30.00	
			Appeal Submitted	5/8/2009		
			Denied	5/11/2009	\$0.00	
TOTALS:					\$90.00	

Create Payment Plan Pay Now

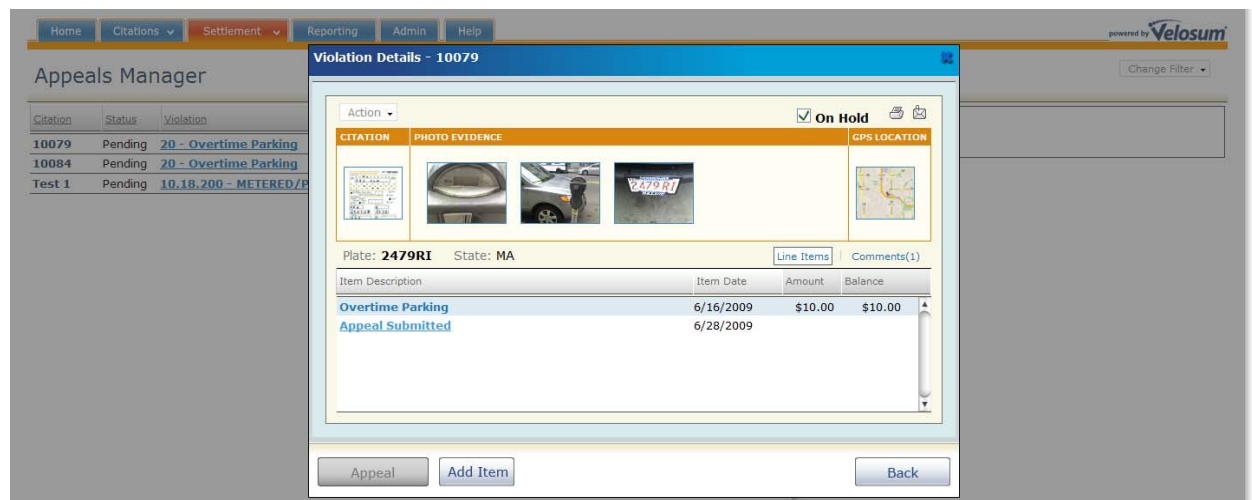
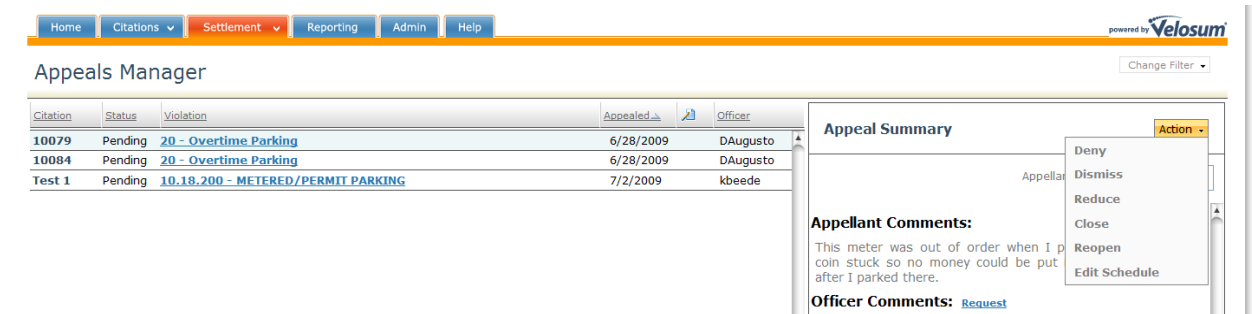
The Payments window provides a searchable list of all payments received from citations



The Appeals Manager provides administrative users with a convenient way to review and post decisions regarding appeals

All in-process appeals are visible in the viewing window on the left, while the viewing window on the right can be used by administrators to take action regarding an appeal

To review violation details, click on an individual citation from the viewing window on the left. A pop-up window will appear with violation details including all photo evidence, GPS location, and a rendered version of the original citation.



The Demand Letters functionality provides administrative users with a push-button way to manage all formal communications with individuals who have received citations

Multiple types of demand letters can be sent through this interface (1st notification, 2nd notification, final notification, etc.)

- Velosum has developed standard content and format for these letters, but can also work with individual clients to make requested adjustments
- To send demand letters, use the customer dropdown at the top of the page to search for citations falling within a specified time range, select the type of letter to send, select the accounts which should receive the letter, and select the “generate letters” button
- All demand letters will then be printed and ready to be placed in envelopes

The screenshot shows the Velosum web application interface. At the top, there are navigation tabs: Home, Citations, Settlement, Reporting, Admin, and Help. The 'Reporting' tab is active. Below the navigation, there is a header area with 'Update List' and 'Last Updated 3:41:23 PM'. A dropdown menu shows 'Customer: Provo; Schedule: 1st Notification; Date from 6/29/2009 to 7/6/2009;'. Below this is a table with columns: Select All, Citation, Plate, State, Issued, and Valid Address. The table contains 18 rows of data, all with 'Invalid' in the Valid Address column. To the right of the table, there are buttons for 'Update Accounts', 'Update Work List', and 'Generate Letters'. A 'Work list' sidebar is also visible on the right.

Select All	Citation	Plate	State	Issued	Valid Address
<input checked="" type="checkbox"/>	856613	Z954JR	UT	7/4/2009	Invalid
<input checked="" type="checkbox"/>	857764	A546JU	UT	7/4/2009	Invalid
<input checked="" type="checkbox"/>	856611	417004	WY	7/4/2009	Invalid
<input checked="" type="checkbox"/>	856610	307NXC	UT	7/4/2009	Invalid
<input checked="" type="checkbox"/>	856609	1F37516	ID	7/4/2009	Invalid
<input checked="" type="checkbox"/>	856608	A175TY	UT	7/4/2009	Invalid
<input checked="" type="checkbox"/>	856607	ESX477	CN	7/4/2009	Invalid
<input checked="" type="checkbox"/>	857763	812UTU	UT	7/4/2009	Invalid
<input checked="" type="checkbox"/>	857762	674VZU	UT	7/4/2009	Invalid
<input checked="" type="checkbox"/>	857761	321PLV	UT	7/4/2009	Invalid
<input checked="" type="checkbox"/>	856606	A754NT	UT	7/4/2009	Invalid
<input checked="" type="checkbox"/>	857758	558UNE	UT	7/4/2009	Invalid
<input checked="" type="checkbox"/>	856605	183OAF	CO	7/4/2009	Invalid
<input checked="" type="checkbox"/>	856604	653PDT	UT	7/4/2009	Invalid
<input checked="" type="checkbox"/>	857756	601WTC	UT	7/3/2009	Invalid

Note: Demand letters are typically only sent to offenders whose addresses have been validated via a 3rd party intermediary with access to government/DMV address databases. For additional information about the demand letter functionality, please contact your Velosum sales person.

Reporting

- The Reporting tab provides an interface where system administrators can quickly access analytical tools which are meant to enhance visibility to important trends and to maximize the value of real-time data.
- The following reports are currently available:
 - Top Offender
 - Investigative
 - Violations
 - User Activity
 - Payments
 - Voids & Warnings
 - Accounts Receivable
 - Account Summary
 - Citations
 - Appeals
 - Delinquent Accounts
 - Write-Offs
 - Parcel Re-Inspection

Admin

- The Admin tab contains a number of administrative options that can be utilized to set user access and to determine other organizational aspects of the vCitePlus portal
- For a full overview of this area of the portal, please contact your Velosum sales representative



Help

- The Help tab provides a mechanism whereby users can obtain direction related to many of the commonly performed tasks within the vCitePlus portal.



Data Validation

All data which is captured by Velosum’s digital pens and subsequently transmitted into the vCitePlus Portal is validated for accuracy by members of the Velosum Validation Team. This validation service, which is free to Velosum customers, is a mechanism whereby staff members compare handwritten citations completed in the field to digital, rendered versions of the same citation. By undertaking this additional step, Velosum is able to identify and flag instances of illegible handwriting or improperly completed forms. Through its proprietary handwriting recognition software and validation services, Velosum is able to provide customers with completely accurate data over 99% of the time.

The validation team operates 7 days a week from 6:00am – 6:00pm MST. During this time window, all citations are reviewed and validated within five minutes of transmission to the portal. Citations which are given outside of normal operating hours are reviewed and validated the next day.

Chapter 6 – Tips and Troubleshooting

Useful Tips

Replacing Ink Cartridges

- 1 – Remove the pen cap
- 2 – To remove the old ink cartridge, insert the pen tip into the small hole in the pen cap
- 3 – Gently exert pressure until the ink cartridge dislodges from the pen casing
- 4 – Remove the old ink cartridge by sliding it out of the bottom of the pen
- 5 – Insert the new ink cartridge into the pen and lightly press the tip against a hard surface until the cartridge is firmly embedded into the pen casing

Note: To purchase replacement ink cartridges, please contact Velosum Customer Support