County Connection

To: Marketing, Planning, & Legislative Committee   Date: November 25, 2015

From: Anne Muzzini, Director of Planning & Marketing

SUBJECT: Clipper Rollout

Summary of Issues:

November 1st we rolled out the Clipper system on all the fixed route buses. It was a rocky start with a large percentage of the units suffering unscheduled power shut downs. Cubic has been working to rectify the situation by installing special tracking software on a subset of the buses, designing new software to control the power unit, and continuing to test and reconfigure. This doesn't seem to be bothering passengers as indicated by a lack of complaints. We've received 4 of them in the first 25 days of service.

Ridership data indicates that 4% of our passengers used Clipper to pay their bus fare in the first 25 days of operation. The heaviest use is on the routes #6, 35, 10, and 20. There are even Clipper users on some of the school tripper routes.

Attached for your review and discussion is a report of the fare method by route and the November Clipper report developed by MTC which includes a description of the East Bay rollout.

Fare Method by Route

Fare Demographics Nov 1 to today

Fare Payment Method

Route	Trips	Total	12PNCH ADULT	12PNCH	12PNCH COMCSH	CLIPPR	CLIPPR SENIOR	BUSTFR	BRTTFR FREE	BRTTFR	BRTTFR MOPASS	COMCRD	COMCRD S20RDE	MIDFRE	SBRTFR BART+	SBRTFR	BSHRCH ACE92X	BSHRCH	COCO 91X	COCO	COCO SMCO	JFKU PROMO	JFKU
Route #1	248	2,993	487	137	.	205	211	485	64	382	125	5	220	584	8	36	.	45	.	.	.	.	.
Route #1M	178	316	99	14	.	56	28	37	6	41	23	1	6	.	.	.	.	5	.	.	.	.	.
Route #2	58	190	50	49	.	20	21	11	5	15	1	.	15	.	.	.	.	3	.	.	.	.	.
Route #3	95	655	142	38	.	16	49	198	151	1	15	.	12	34	.	.	.	.	.	.	.	.	.
Route #4	926	8,109	.	.	.	.	.	12	8,077	20	.	.	.	.	.	.	.	.	.	.	.	.	.
Route #5	617	6,507	.	.	.	.	.	2	6,475	30	.	.	.	.	.	.	.	.	.	.	.	.	.
Route #6	449	6,951	1,294	728	3	612	201	194	100	930	177	615	140	180	16	23	1	1	2	.	1,733	1	.
Route #7	491	3,027	.	.	.	.	1	2	3,022	2	.	.	.	.	.	.	.	.	.	.	1	.	.
Route #9	404	7,241	1,693	658	7	322	471	1,553	181	527	618	62	204	701	39	56	.	140	.	.	.	9	.
Route #10	957	15,678	4,199	1,486	6	903	986	2,482	737	1,582	978	73	637	1,342	108	81	.	75	.	.	.	.	3
Route #11	266	3,788	1,227	296	.	94	236	613	323	166	242	11	118	409	21	5	.	25	.	.	.	1	.
Route #14	480	7,383	2,651	429	.	249	377	1,433	371	653	535	23	118	389	4	58	1	91	1	1	.	.	.
Route #15	295	5,753	1,505	745	1	254	364	963	335	331	502	69	171	328	27	48	1	106	1	.	.	1	.
Route #16	519	9,692	3,194	552	1	179	705	2,386	622	512	467	12	241	722	14	29	.	45	.	.	1	.	10
Route #17	315	3,148	650	124	.	189	303	967	88	180	35	14	330	225	5	20	.	19	.	.	.	.	.
Route #18	287	6,029	1,843	929	.	217	286	845	94	344	373	110	186	761	4	13	.	23	1	.	.	.	.
Route #19	156	1,882	566	146	3	79	79	345	100	124	118	6	99	210	3	2	.	4	.	.	.	.	.
Route #20	830	14,520	4,167	1,564	2	879	476	2,463	521	1,962	876	164	249	1,067	38	33	.	59	1	1	.	.	.
Route #21	498	7,066	2,154	641	.	380	342	964	94	838	414	92	138	684	10	56	.	259	1	.	.	.	.
Route #25	119	466	105	8	.	24	37	116	10	49	6	4	28	62	5	2	.	9	.	.	1	.	.
Route #28	256	3,805	1,164	310	.	168	352	649	197	308	244	11	56	309	13	9	1	13	.	.	.	.	.
Route #35	415	6,187	1,446	990	3	361	158	759	145	490	209	239	84	571	2	44	.	685	.	.	.	.	.
Route #36	227	2,433	590	180	.	84	157	349	104	138	140	10	75	232	10	6	.	358	.	.	.	.	.
Route #91X	117	808	15	35	137	89	36	96	9	137	38	3	36	.	.	3	.	15	160	.	.	.	.
Route #92X	146	2,634	.	1	16	4	.	8	3	.	2	1	.	.	.	1	1,741	857	.	.	.	.	.
Route #93X	110	1,554	1	43	403	72	43	161	19	62	104	35	11	.	19	4	1	576	.	.	.	.	.
Route #95X	135	1,645	10	80	307	176	26	79	19	213	14	195	46	.	14	6	1	461	.	.	.	.	.
Route #96X	550	5,778	10	32	341	146	17	290	21	202	55	186	22	2	23	3	3	4,423	.	.	.	.	.
Route #97X	152	998	5	3	130	28	6	24	3	32	14	11	2	.	.	1	1	738	.	.	.	.	.
Route #98X	388	4,832	45	324	1,216	273	245	899	347	287	282	44	81	473	17	16	1	283	.	.	.	.	.
Route #301	35	174	36	4	.	18	17	25	1	18	6	1	6	40	1	.	.	.	.	.	.	.	.

Fare Method by Route

Fare Demographics Nov 1 to today

Fare Payment Method — top-level fare codes: 12PNCH (over ADULT, COMCSH), CLIPPR, BUSTFR, BRTTFR, COMCRD, MIDFRE, SBRTFR, BSHRCH, COCO, JFKU.

Route	Trips	Total	ADULT	COMCSH	CLIPPR	SENIOR	BUSTFR	FREE	BRTTFR	MOPASS	COMCRD	S20RDE	MIDFRE	BART+	SBRTFR	ACE92X	BSHRCH	91X	COCO	SMCO	JFKU	PROMO
Route #310	178	2,117	585	98	.	80	186	417	67	254	96	3	46	244	6	7	.	28	.	.	.	.
Route #311	74	1,128	312	30	.	59	79	203	67	81	68	6	33	165	6	5	.	13	.	.	.	.
Route #314	161	2,827	983	117	.	71	186	633	135	269	166	1	33	208	8	7	.	9	.	.	.	.
Route #315	53	267	75	9	.	11	21	25	8	15	30	3	16	43	6	1	.	6	.	.	.	.
Route #316	72	1,430	398	109	3	64	88	257	83	66	88	5	41	201	4	17	.	6	.	.	.	.
Route #320	87	686	215	32	.	38	37	163	39	50	43	4	6	53	.	.	.	8	.	.	.	.
Route #321	94	1,174	520	47	.	45	32	127	31	204	46	8	14	34	.	8	.	57	.	.	.	.
Route #601	19	467	48	375	1	10	.	8	.	2	15	.	7	.	2	.	.	.	.	.	.	.
Route #602	28	1,015	46	923	.	10	.	1	13	.	17	3	1	.	.	.	.	.	.	.	.	.
Route #603	19	276	38	177	1	1	.	1	2	.	28	24	3	.	.	.	.	.	.	1	.	.
Route #605	19	418	55	348	.	4	.	.	1	.	10	.	.	.	.	.	.	.	.	.	.	.
Route #606	97	3,431	639	2,330	4	72	14	12	43	38	239	28	5	.	.	.	.	1	.	5	1	.
Route #608	23	268	64	130	.	4	.	2	.	.	68	.	.	.	.	.	.	.	.	.	.	.
Route #609	8	49	29	16	.	2	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Route #610	13	88	29	40	.	.	5	11	1	.	1	.	1	.	.	.	.	.	.	.	.	.
Route #611	13	458	273	127	.	23	.	4	2	.	27	.	.	.	.	2	.	.	1	.	.	.
Route #612	8	174	42	67	.	1	2	18	24	4	12	.	.	.	.	5	.	.	.	.	.	.
Route #613	1	57	44	12	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Route #614	10	158	64	81	.	1	4	4	.	.	2	.	1	.	1	.	.	.	.	.	.	.
Route #615	9	283	165	93	.	.	2	1	5	.	7	.	10	.	.	.	.	.	.	.	.	.
Route #616	21	427	204	77	.	26	3	19	16	3	80	.	.	.	.	.	.	.	.	.	.	.
Route #619	5	173	156	17	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Route #622	8	218	54	116	.	.	.	.	.	3	.	6	1	34	.	.	.	4	.	.	.	.
Route #623	10	484	181	293	.	6	.	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Route #625	22	367	119	200	2	8	.	8	.	1	17	9	3	.	.	.	.	.	.	.	.	.
Route #626	14	210	39	163	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.	.
Route #627	20	576	2	.	.	35	47	210	6	5	.	.	268	.	1	1	.	.	.	.	.	.
Route #635	9	135	22	110	.	.	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.
Route #636	7	162	44	104	.	.	.	1	.	.	2	.	.	.	.	.	.	5	.	5	.	.
Route #649	13	3	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Fare Method by Route

Fare Demographics Nov 1 to today

Route	Trips	Total	12PNCH ADULT	COMCSH	CLIPPR SENIOR	BUSTFR FREE	BRTTFR MOPASS	COMCRD S20RDE	MIDFRE BART+	SBRTFR ACE92X	BSHRCH 91X	COCO SMCO	JFKU PROMO

Fare Payment Method

Route	Trips	Total	12PNCH	CLIPPR	BUSTFR	BRTTFR	COMCRD	MIDFRE	SBRTFR	BSHRCH	COCO	JFKU
			ADULT	COMCSH	SENIOR	FREE	MOPASS	S20RDE	BART+	ACE92X	91X	SMCO	PROMO
Total for 61 routes	11,834	161,768	16,787	6,669	21,530	11,568	2,094	10,273	609	9,457	8	13
			34,793	2,587	6,938	22,790	7,682	3,854	434	1,752	169	1,749	14

This report contains confidential information.

Clipper Update

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Projects and Progress

A Message from Jason Weinstein
Principal, Clipper Program

Clipper launched on County Connection, Tri Delta Transit, WestCAT and Wheels on November 1, as planned. In the first 17 days of operation, Clipper customers had taken more than 21,000 trips on these services. Operators reported two device issues, which Cubic has been investigating and, in one case, fixed. See page 2 for more details about the launch, including the device issues.

We keep making progress toward the January launch of Clipper on Sonoma County Transit, Petaluma Transit and Santa Rosa CityBus. We conducted some reports training and will schedule the remaining trainings in December and January. Next up are Cubic's field testing and a 2-week operator tagging test. Cubic is shooting for revenue-ready status by mid-December if field and operator tag testing go smoothly.

Clipper operators have requested additional driver consoles and card readers through the life of the program to accommodate vehicle fleet expansions. We've historically used excess Clipper inventory to fulfill these requests. However, due to the obsolescence of the equipment and continued demand, we now anticipate running out of legacy devices by spring 2016.

To supplement the inventory of legacy devices, MTC plans to replace VTA's legacy bus devices with the next-generation equipment (referred to as the DC3 and CID5) beginning in late summer 2016. This will return about 500 legacy devices to the program's inventory. We're also working with Cubic and operators to identify units that can be made available for redeployment until the VTA devices are available.

Going forward, requests for larger quantities of bus devices will be fulfilled with the next-generation equipment; this equipment is currently being used on the East Bay operators. We will continue to work closely with operators to support this technology transition as their fleets expand.

In October, Cubic successfully deployed back-office software enhancements to improve automation of fare refunds, which means our Customer Service Center will be able to handle the 2,000 monthly customer refund requests we receive with greater speed, efficiency and accuracy. The enhancements are part of a multi-year project to integrate systems, reduce human error and improve reconciliation of exception transactions that affect operator settlement.

So far, Cubic has improved six of Clipper's most common transactions, including Autoload set-up and Clipper Direct refunds. They will tackle an additional 15 transaction types between now and the end of 2016. Customers ultimately will benefit from speedier refunds and balance transfers, as well as improved customer service. Transit operators will benefit from reduced customer bad debt issues, greater system stability and more accurate financial data.

The revised Clipper memorandum of understanding is nearing full execution. All but one agency (Napa County Transportation and Planning Agency) have received board approval, and four additional agencies (BART, SFMTA, and the cities of Petaluma and Santa Rosa) need to finalize execution. Our commission approved it on October 28.

This past spring, MTC and operator staff selected the IBI Group to lead us from the planning process into the development process for the next generation Clipper system. IBI has reviewed the system description document, the culmination of much input from operator staff, and produced the systems engineering review form (SERF), a planning document review report, a draft preliminary transition plan and a peer agency experience report.

If you have questions, please contact your Clipper liaison here at MTC. You can also reach me at 510.817.5875 or jweinstein@mtc.ca.gov.

East Bay Launch Summary

Clipper launched on County Connection, Tri Delta Transit, WestCAT and Wheels on November 1. In the first 17 days of operation, Clipper customers took more than 21,000 trips on these services. That averages out to more than 1,200 transactions per day; the average for business days (taking out Veterans Day in addition to weekends) was more than 1,600 transactions a day. Interestingly, we can see that on the 11 business days in that period, a little more than 700 cards on average were used on both BART and at least on of the East Bay operators.

Since November 1, Clipper customers have purchased 109 passes for these agencies, including 31 East Bay Regional passes.

Only a few customers have contacted Clipper Customer Service with questions.

Operators reported two problems with devices:

- **Time Issues** – Operators reported problems with devices keeping the right time. Some devices experienced an issue where the clock would roll back one hour if the vehicles were not within range of a Clipper data server (TDS/CDS) when they came into service; each reboot was causing clocks to be set back one hour, until the devices came back within range of a TDS/CDS. The problem was identified as being related to Daylight Savings Time, and Cubic has successfully deployed a software fix to all operators. This issue may have affected fares for some customers— specifically calculation of transfers and accumulation of fares paid for the day pass.

Cubic is developing a query to determine any customer impacts.

- **CID5/Driver Consoles Shut-Down** – Operators also reported devices intermittently going out of service. To date, at least 40 vehicles have had this issue. Cubic staff in the Bay Area, Australia and Tennessee have been working on the problem, with local staff visiting bus yards and monitoring device performance issues. Cubic staff installed diagnostic software on three buses to gather data and analyzed the data, and they believe the source of the problem is the settings on the Universal Power Supply (UPS) equipment. Initial lab testing and field testing on one bus seem to confirm this. Cubic will be changing the settings on a number of buses this weekend and monitoring the results over the next week. If results continue to confirm that the UPS settings are the source of the problem, Cubic will update the settings on all vehicles in the East Bay operators' fleets.

MTC is deploying Clipper brand ambassadors to 11 outreach events at transit centers, BART stations and other locations in November; ambassadors distributed more than 500 cards and made nearly 1,250 additional customer contacts at the first seven events. We are scheduling another 22 outreach events for January, to accompany an advertising campaign to promote Clipper on these agencies.

Table 1: Summary of System Usage

	Last Month October 2015	Prior Month September 2015	Prior Year October 2014
Transaction Volume			
Average Weekday Ridership[1]	848,163	838,893	784,065
Fee-Generating Transactions[2]	23,549,754	22,076,342	20,080,925
Unique Cards Used	906,301	892,127	810,300
Active Card Accounts	1,714,344	1,695,689	1,514,518
Settled Transit Operator Revenue	$46,195,442	$43,945,916	$44,159,825
Autoload Activity			
Percent of Registered Cards with Autoload	32%	32%	36%
Call Volume			
Customer Service Representative (CSR) Calls	29,622	31,770	29,687
CSR Calls per Unique Card Used	0.03	0.04	0.04
Website Traffic			
Unique Visitors - Standard	139,278	147,818	143,423
Unique Visitors - Mobile	54,400	57,972	39,590
Website Visits - Standard	195,594	207,999	202,719
Website Visits - Mobile	93,023	101,060	66,452
Website Visits per Unique Card Used	0.26	0.28	0.33

Notes on System Usage:

Clipper topped the 23-million mark for the first time with 23,549,754 fee-generating transactions. From September to October, we saw minimal increases in average weekday ridership (1.1 percent), fee-generating transactions (0.7 percent), unique cards used (1.6 percent) and active card accounts (1.1 percent). The increase in settled transit operator revenue—5.1 percent—was greater.

The data revealed that the mobile website is serving many customers' need for important Clipper information. System usage in the last year grew across the board—average weekday ridership (8.2 percent), fee-generating transactions (17.2 percent), unique cards used (11.8 percent), active card accounts (13.2 percent) and settled transit operator revenue (4.6 percent). While customer service calls stayed roughly the same during that same period and use of the desktop website dropped slightly (-2.9 percent for unique visitors and -3.5 percent for total website visits), use of the mobile site increased significantly (37.4 percent for unique visitors and 40 percent for total visits). The mobile site now accounts for 28.1 percent of all unique visitors to Clipper websites and 32.2 percent of combined total website visits.

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[1] Includes average daily number of boardings, including transfers but excluding some Caltrain monthly pass trips (Caltrain only requires monthly pass customers to tag their cards once at the beginning of each month).
[2] Includes single-tag fare payments, BART and Caltrain exits, Golden Gate Transit entries, add-value transactions, opt-out purse refunds and pass use, including institutional passes. Does not include transfers or transactions where fee value is $0 (e.g., issuance of free cards, zero-value tags in dual-tag systems, etc.).

System Performance

Figure 1: Transactions[3]

Chart showing Clipper Total (dashed) and Clipper Fares (solid) transactions from Oct-13 to Oct-15. Clipper Total ends at 23,549,754 and Clipper Fares ends at 21,802,117.
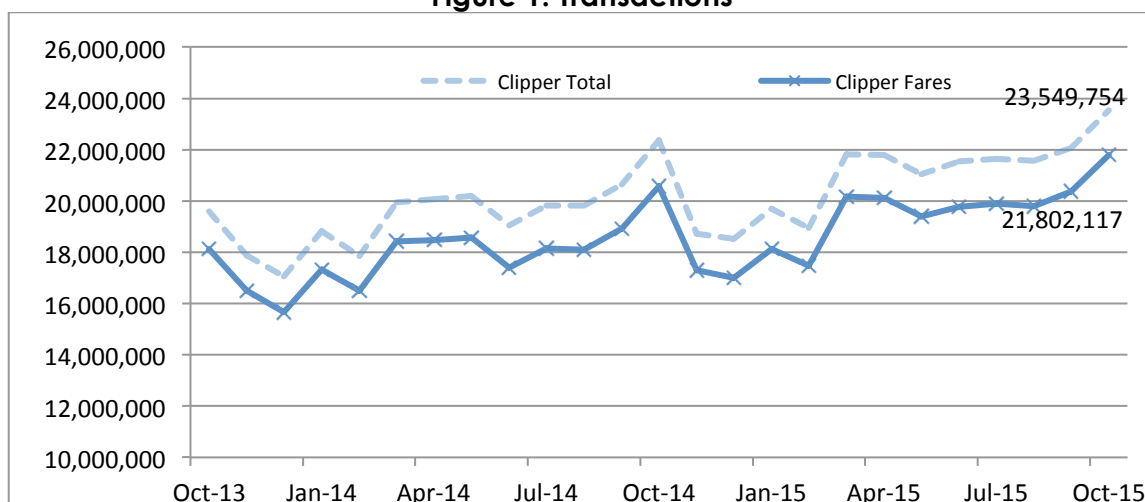
Table 2: Monthly Market Penetration Rates[4]

	Monthly Clipper Boardings	Clipper Market Penetration Rate		
	September 2015	September 2015	August 2015	September 2014
AC Transit	2,002,385	41.2%	39.5%	35.2%
BART[5]	6,545,575	60.6%	58.3%	57.1%
Caltrain[6]	300,887	63.4%	57.4%	55.9%
FAST	11,298	11.9%	12.5%	N/A
Golden Gate Ferry	206,524	89.4%	89.9%	90.3%
Golden Gate Transit/Marin Transit	215,999	41.4%	40.9%	40.8%
Napa VINE	3,274	4.4%	4.1%	N/A
SamTrans	439,863	35.8%	33.1%	34.4%
SF Bay Ferry	109,865	47.5%	42.5%	28.5%
SFMTA	9,246,799	47.3%	48.0%	45.2%
SolTrans	18,412	14.1%	13.9%	N/A
Vacaville City Coach	168	0.3%	0.3%	N/A
VTA	1,613,998	40.8%	36.6%	34.7%

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3 "Clipper Total" is fare-payment and add-value transactions that count toward the 20 million-transaction contract benchmark.
4 MTC uses the National Transit Database (NTD) to calculate most market penetration rates. NTD typically has a two-month delay before ridership data are available.
5 Calculation of BART monthly market penetration is calculated using monthly BART total exits by ticket type, which is equivalent to number of linked trips per month.
6 Calculation of Caltrain market penetration assumes that monthly pass holders board Caltrain 1.75 times a day per weekday. Caltrain sold 16,168 calendar passes during the September 2015 pass vending window.

Figure 2: Average Weekday Ridership - AC Transit, BART, SFMTA and VTA
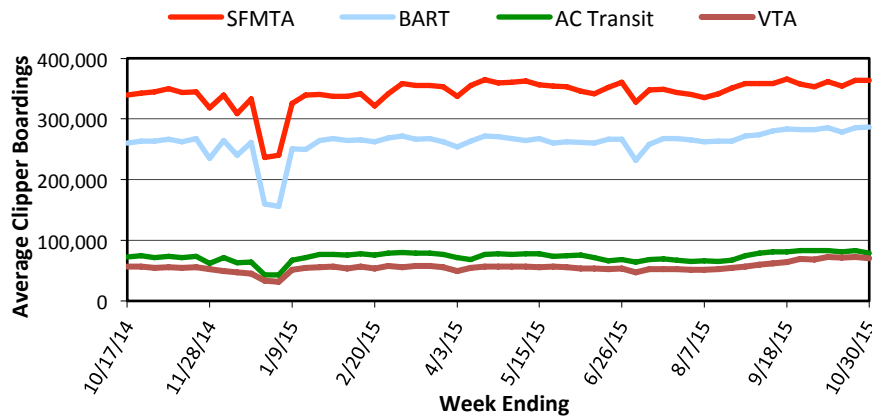
Figure 3: Average Weekday Ridership - Caltrain[7], Golden Gate Bus/Ferry, SamTrans and San Francisco Bay Ferry (WETA)
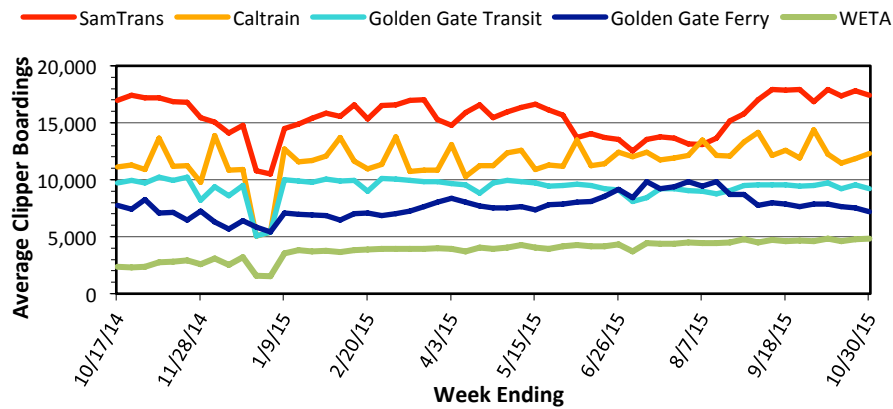
Figure 4: Average Weekday Ridership - FAST, Napa VINE, SolTrans, Vacaville City Coach
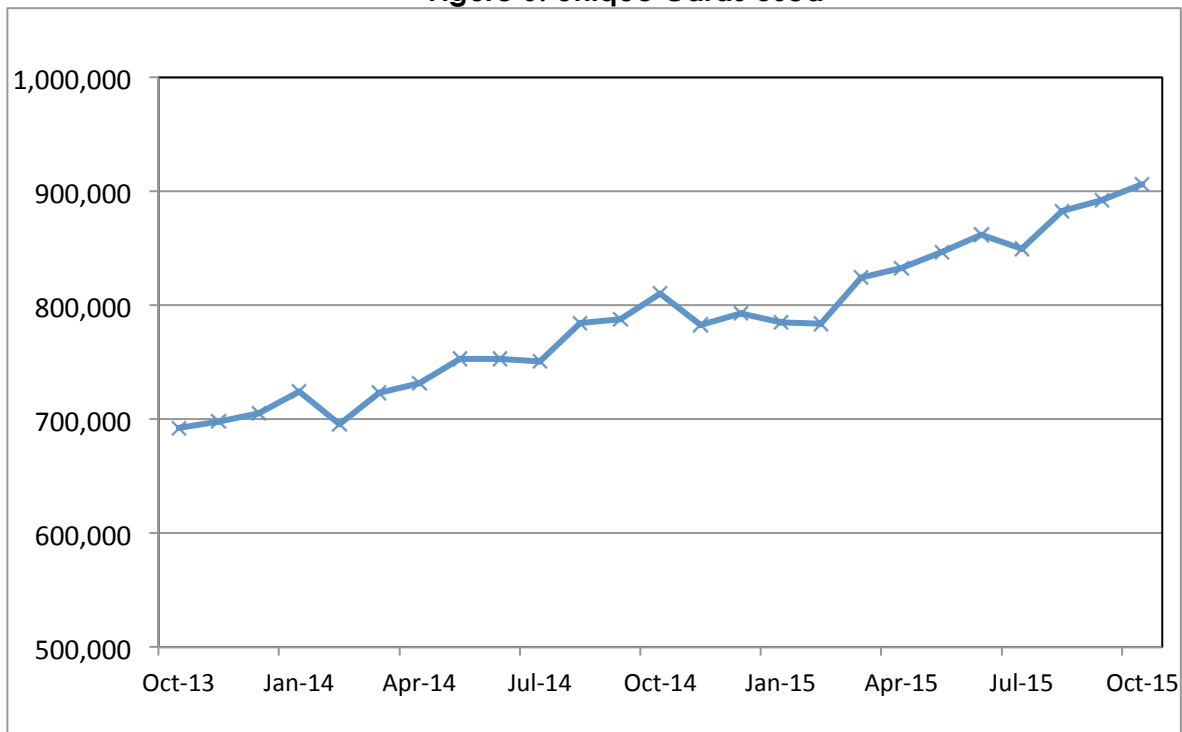

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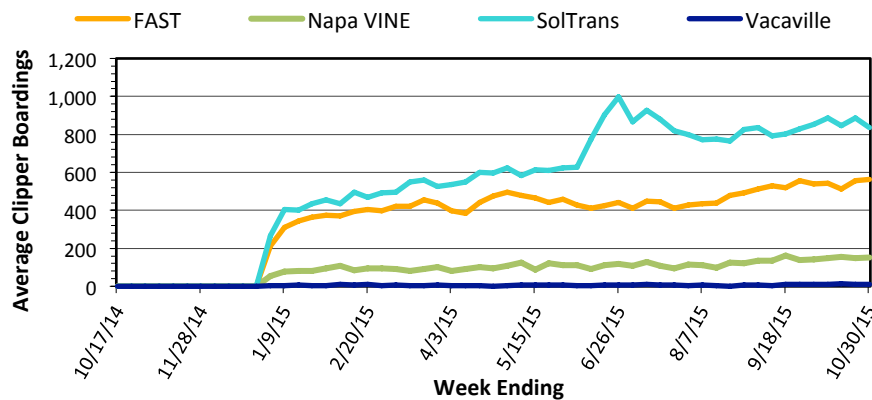
7 Spikes in Caltrain boardings at the beginning of the month are due to Caltrain monthly pass holders' only needing to tag on and off during their first ride of the month to load their passes.

Figure 5: Number of Active Cards[8] in Circulation per Month
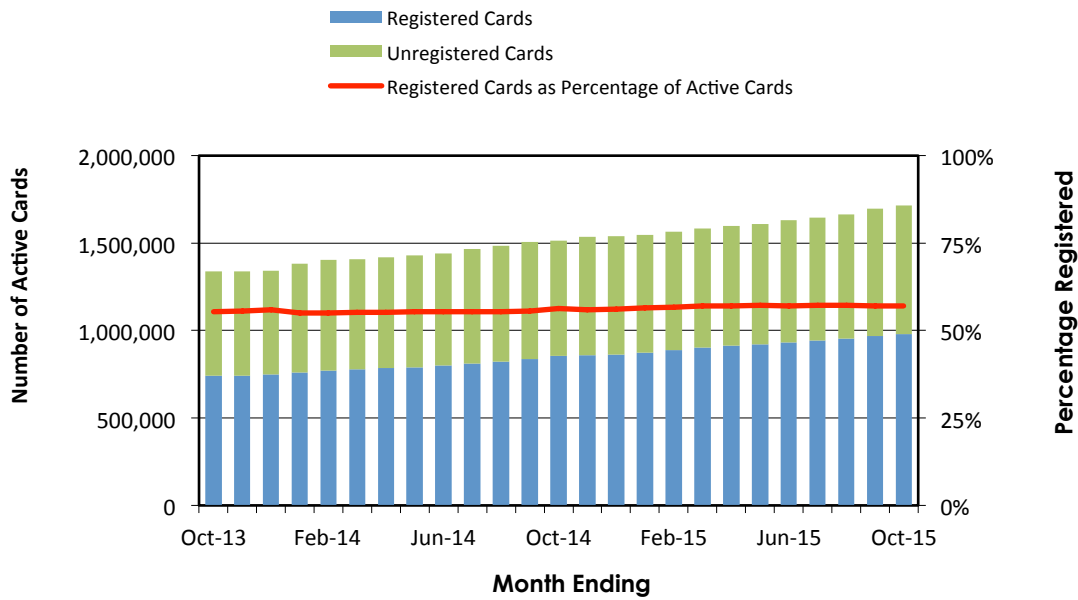
Figure 6: Unique Cards Used[9]

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8 Active cards are those that have been used at least once within the last 12 months. Sudden fluctuations may be attributable the number of days in a given month.
9 Unique Clipper cards used in a specific month

System Implementation

Table 3: Expansion and Enhancement Highlights

Operator	Description/Completion Date	Status
Phase III - East Bay Operators	Implementation of Clipper on County Connection, Tri Delta Transit, Wheels and WestCAT (Complete)	Clipper launched on these four operators on November 1. Please see pages 1 and 2 for details.
Phase III – Sonoma and 101 Corridor Operators	Implementation of Clipper on two operator groups in Sonoma County: (1) Santa Rosa CityBus and Petaluma Transit and (2) Sonoma County Transit (December 2015)	Two operators received reports training; one remains to be scheduled. Operators are scheduled for on-board equipment and ticket office terminal training in December. Cubic will conduct field testing soon, to be followed by operator tag testing. MTC and the operators are continuing weekly check-in calls to discuss testing, training, launch and other issues.
Phase III - East Bay and Sonoma County/101 Corridor Operators	Integrated single driver login (TBD)	MTC and Cubic completed negotiations for an integrated single driver login for the East Bay and Sonoma County operators. MTC is awaiting a revised price proposal from Cubic.
Golden Gate Transit	Zone System Changes (December 2015)	MTC is routing a contract action to expand the zones in Golden Gate Transit's zonal detection system to accommodate the new Route 580. The new route is being developed to connect Marin County to northern Alameda County.
WestCAT	31-Day Pass (December 2015)	On November 13, MTC's Operations Committee approved a change order to implement a 31-day pass on WestCAT's Lynx route between Hercules and San Francisco. The current 31-day pass is only valid on non-transbay service.
Phase III – Union City Transit	Implementation of Clipper on Union City Transit (Summer 2016)	The change order for implementation of Clipper on Union City Transit is being routed internally for approval.
SMART	Implementation of Clipper on Sonoma-Marin Area Rail Transit (SMART) (late 2016)	MTC's Operations Committee on November 13 approved a change in the funding for Clipper ticket machines, scheduled for delivery in late summer 2016. Remaining implementation—platform and handheld card readers, ticket office terminal and other equipment and services—will be complete by fall 2016. MTC facilitated a kick-off meeting for Cubic and VenTek, the company providing the ticket machines, in mid-November.

Table 3: Expansion and Enhancement Highlights (continued)

Operator	Description	Status
AC Transit	Implementation of Clipper on new Bus Rapid Transit (BRT) service (2017) and other projects	On November 13, MTC's Operations Committee approved a change order with Cubic to install card readers and network equipment for AC Transit's Bus Rapid Transit (BRT) service, scheduled to launch in late 2017. The BRT system will consist of 23 center running stations and 24 curbside stations, each with two to three Clipper card readers. AC Transit is funding this work. Next steps are to finalize negotiations and route the change order. The Operations Committee also approved redeploying eight previously decommissioned Add Value machines at the Transbay Transit Center, pending execution of a supplemental funding agreement with AC Transit to pay for this work. We are routing the change order for integrated single driver login as well as the supplemental funding agreement; AC Transit is funding this work as well.
SFMTA	Implementation of Clipper on the Central Subway (2018)	We executed a funding agreement and are in the process of executing a change order for implementation of Clipper on the new Central Subway. The next step is for Cubic to submit a schedule, which SFMTA and MTC will review and approve.
BART	Extension stations (phases)	All Clipper work is complete for the Warm Springs (South Fremont) extension station except for installation of handheld card reader 3 (HCR3) cradles. We are working on a funding agreement to cover the cost of Clipper implementation for the next four stations: Milpitas, Berryessa, Pittsburg Center and Antioch.
All	Network Modernization (Ongoing)	Network circuits had to be re-installed at three Caltrain sites due to AT&T errors. The new Caltrain Centralized Equipment Maintenance & Operations Facility AT&T circuit was installed and is awaiting swap-out of Clipper network equipment. Circuit installation is on hold at the BART Warm Springs station until the end of November. This project does not include installation of new AT&T circuits at VTA sites, but Phase 2 BART and SamTrans circuit installation orders have started going out and will be rolled out over a two-week period.

Table 4: Software Release Highlights

Deployment Date	Description
Completed	• Enable 101 Corridor and Sonoma County products for display on ticket machines and product sales • Enable East Bay product sales on desktop, mobile and Clipper Direct websites • Enable East Bay microsites and related website updates • Update to website Twitter and YouTube icons • Circular transfer correction • Enable product sales for Sonoma/101 Corridor operators • Fare increase announcement and home page hero graphic changes • Remove Caltrain + Muni pass (change is implemented for Clipper Direct only) • Deployment of test configuration data for BART fare changes
December	• Golden Gate Transit zone extension (for new Route 580) • Golden Gate Transit and Ferry service change • NONE route on Tri Delta Transit and Wheels • Remove Caltrain + Muni pass (all channels except Clipper Direct, to be effective January 1) • SamTrans product policy/price and fare changes (change is implemented for Clipper Direct only) • Changes to Get Clipper and Order a Clipper Card web pages
January	• BART fare and minimum balance requirement changes • BART-to-VTA transfer changes • Remove Caltrain + Muni pass • SamTrans product policy/price and fare changes (effective January 10) • SFMTA transfer, product and fare changes • Disable special event pass from SFMTA cable car • NONE route to be valid on Napa/Solano operators
February	• SamTrans product price change
TBD	• Migration of Clipper Direct to JavaServer Faces (JSF), a standard Java framework for building user interfaces for web applications • Test Pivotal customer service application user interface upgrades to IE11 • Add VTA special event routes (on hold per VTA request)

*Fare changes may appear multiple times if Cubic needs to issue multiple software releases to implement a specific change. For example, Cubic may need to post a notice about a change, make the change to pricing for Clipper Direct one month later and then make the change in all other sales channels one month after that. Each change is noted separately.

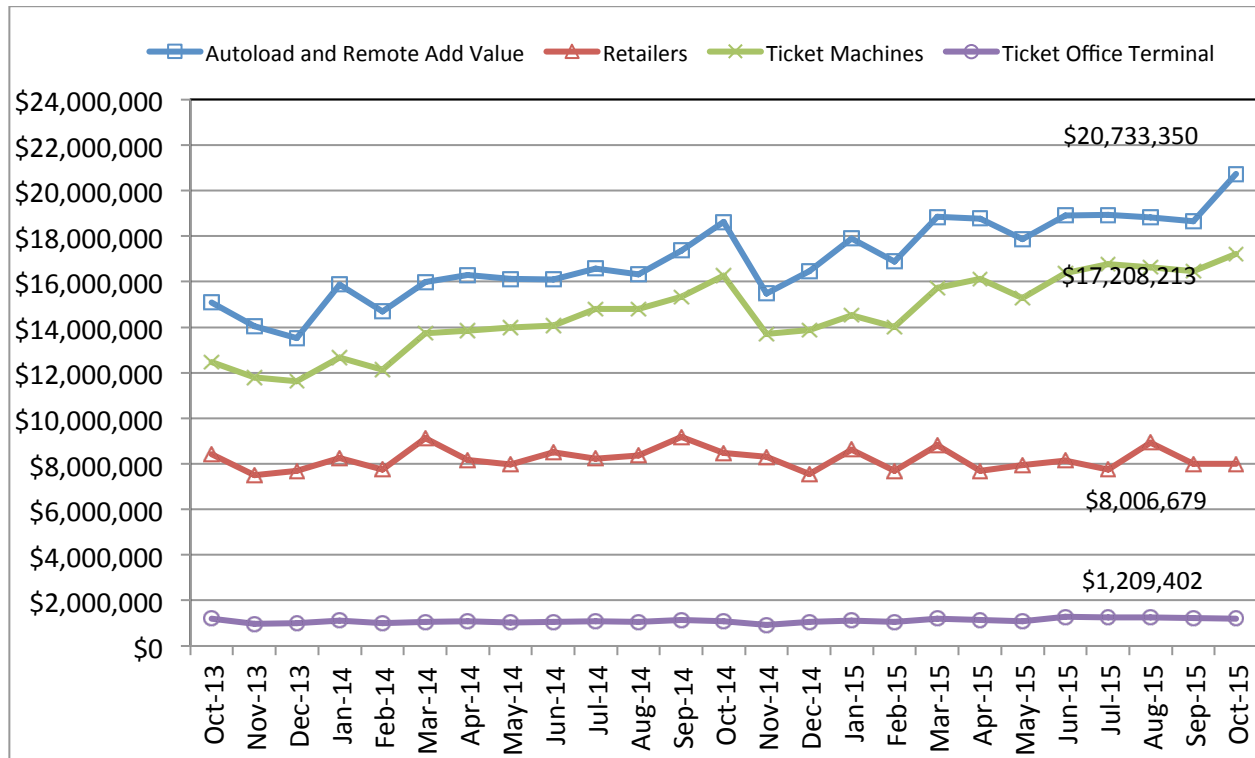# Value Distribution

Figure 7: Clipper Sales by Channel

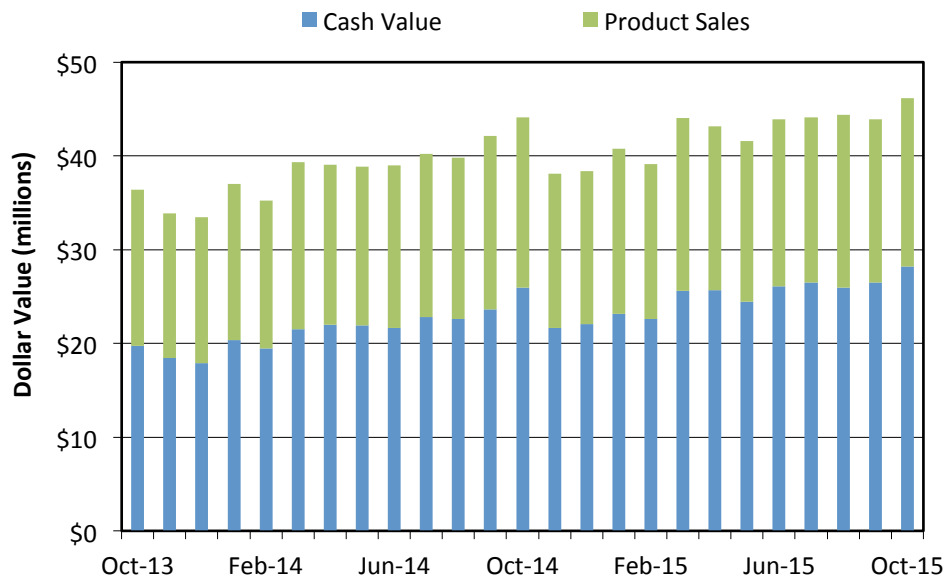**Figure 8: Cash and Product Sales per Month**

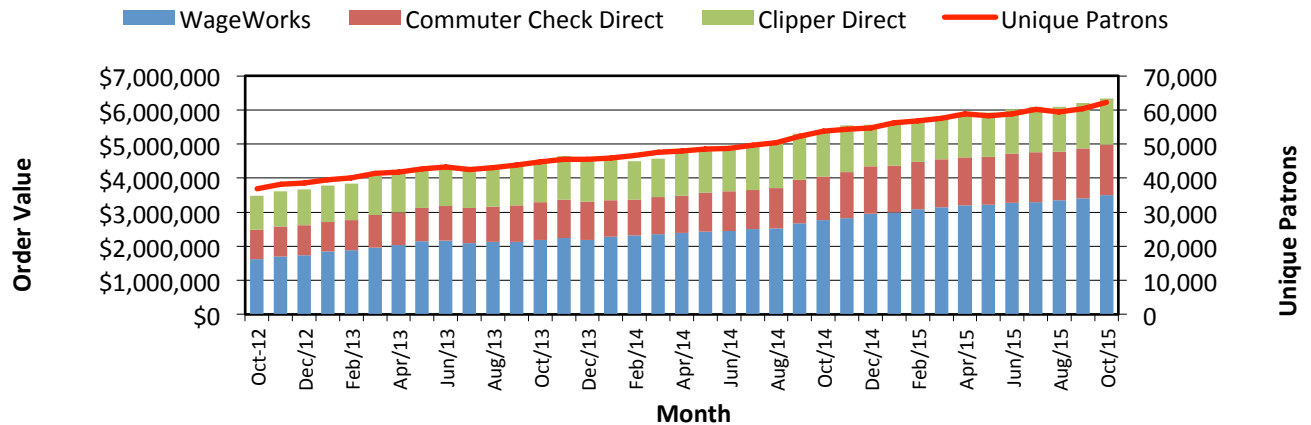**Figure 9: Order Value and Unique Patrons by Employer Program per Month**

Table 5: Retail Sales Volume, October 2015

Sales	October 2015 Sales (31 days)	Change from September 2015 (30 days)
Cash Sales	$3,717,392	1%
Pass Sales	$4,289,288	-1%
Total Sales*	**$8,077,380**	**0%**
Cards Sold	23,567	-13%

Includes $70,701 in card sales fees.

Table 6: Clipper Retail Locations and Sales by County, October 2015

County	Current Retailers	Total Sales*	Average Sales Per Location
Alameda	68	$1,031,993	$15,176
Contra Costa	35	$247,431	$7,069
Marin	15	$58,172	$3,878
Napa	3	$2,681	$894
San Francisco	102	$5,142,802	$50,420
San Mateo	34	$620,558	$18,252
Santa Clara	50	$920,472	$18,409
Solano	6	$14,380	$2,397
Sonoma	10	$38,891	$3,889
Total	**323**	**$8,077,380**	**$25,007**

Total sales numbers include card sales fees, totaling $70,701 in October.

Customer Education

Transit Agency Launches: We launched Clipper on County Connection, Tri Delta Transit, WestCAT and Wheels on November 1, as planned. Operators posted car cards and have take-ones and brochures in hand. We are conducting 11 outreach events for the first phase of the launch, and will then conduct another 22 after the holiday season in conjunction with an advertising campaign. We distributed more than 500 cards at the first seven events, which took place at:

- Walnut Creek BART

- Livermore Transit Center

- Hercules Transit Center

- Pittsburg/Bay Point BART

- Concord BART

- El Cerrito del Norte BART

- Dublin/Pleasanton BART

We have completed the new *Clipper in Marin and Sonoma Counties* brochure to support the launch of Clipper on Petaluma Transit, Santa Rosa CityBus and Sonoma County Transit in January. We also have developed a bilingual take-one for the launch. Other materials in development include interior bus cards, exterior tail ads, transit shelter ads, bus and ticket office decals, and card sleeves. We met with the three operators this last week to begin planning specific launch activities

VTA Day Pass campaign: We started the first outreach events targeting VTA's current paper day pass customers this week. These events are part of our effort to help low-income and limited English-proficient speakers adopt Clipper when VTA eliminates its paper day pass on January 1. We are deploying a multilingual team of brand ambassadors who speak Vietnamese, Chinese and Spanish to reach non-English speakers in VTA's service area. We plan to conduct an additional 20 events in January.

Research: Our survey firm, Corey, Canapary & Galanix, is wrapping up interviews for the Clipper customer survey on most participating Clipper operators this week. We will share the results early next year.

Fare Changes: Per earlier issues of the *Clipper Update*, we are supporting fare and policy changes on BART, Caltrain, Muni, SamTrans and VTA. This has involved a significant amount of work updating the Clipper website and operator microsites, developing notices for customers and retailers, preparing social media posts and other communications tasks.

Table 7 on the following page provides an overview of current and near future key Clipper customer education activities.

Table 7: Customer Education Activities, October 2015 – March 2016

	October	November	December	January	February	March
Advertising	Planning for East Bay and Sonoma County launches	→ VTA Day Pass campaign planning	→ VTA Day Pass campaign planning	East Bay advertising campaign Sonoma County launch	→ Sonoma County advertising campaign	→ →
Outreach		East Bay launch outreach, phase 1 VTA Day Pass campaign outreach, phase 1		East Bay launch outreach, phase 2 Sonoma County launch outreach VTA Day Pass campaign outreach, phase 2	Low-income/LEP outreach →	→
Policy/Customer Info Activities	C2 Public Input Planning for East Bay and Sonoma County launches Fare policy changes Website improvements	East Bay launch → → →	→ → → →	→ → Sonoma County launch → →	→ → → →	→ → → →
Other	Planning for customer survey	Customer survey	→			

Financial Information

Figure 10: Revenue by Operator, October 2015
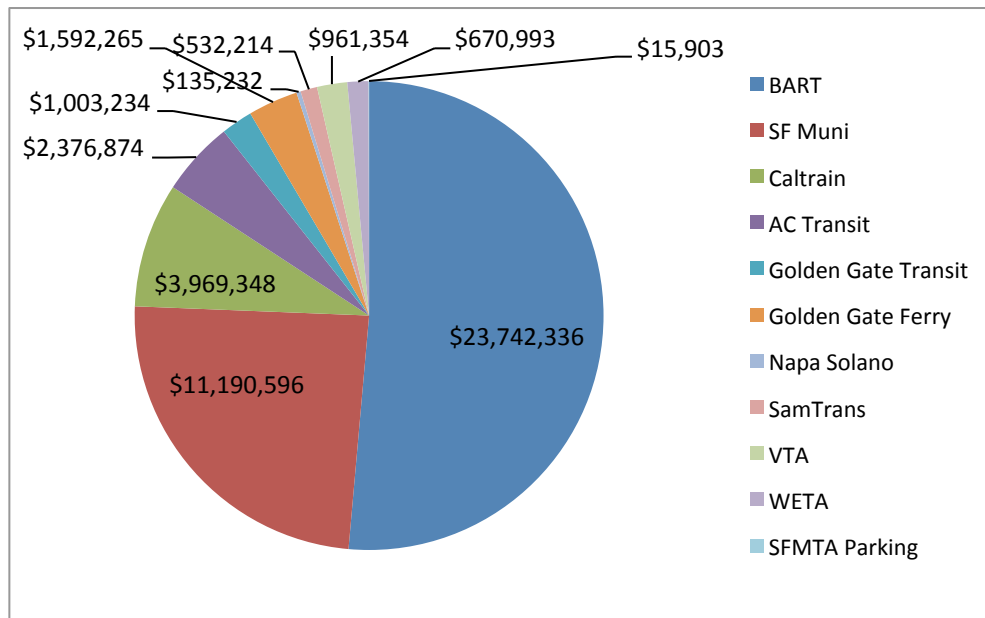
Table 8: Revenue by Operator Per Month, Previous Six Months

Operator	May 2015	June 2015	July 2015	August 2015	September 2015	October 2015
BART	$20,370,081	$21,837,117	$21,986,730	$21,281,354	$21,961,695	$23,742,336
SF Muni	$10,753,214	$10,983,323	$10,884,290	$11,259,037	$10,720,479	$11,190,596
Caltrain	$3,887,487	$4,205,338	$3,927,908	$4,388,242	$4,032,674	$3,969,348
AC Transit	$2,228,885	$2,235,878	$2,243,722	$2,314,461	$2,373,936	$2,376,874
Golden Gate Transit	$881,879	$947,620	$975,992	$965,868	$993,726	$1,003,234
Golden Gate Ferry	$1,410,041	$1,611,657	$2,038,322	$1,895,604	$1,592,462	$1,592,265
Napa/Solano	$97,267	$127,160	$119,746	$117,436	$124,818	$135,232
SamTrans	$496,740	$453,046	$425,862	$529,661	$534,232	$532,214
VTA	$939,399	$929,521	$870,300	$1,028,547	$954,459	$961,354
WETA	$518,454	$570,591	$623,192	$633,187	$641,143	$670,993
SFMTA Parking	$13,810	$13,736	$13,338	$13,909	$14,515	$15,903
Total Monthly Revenue	$41,597,257	$43,914,987	$44,109,401	$44,427,305	$43,944,138	$46,190,348

Table 9: Bank Account Balances, Previous 12 Months

Month End	Float[10]	Participant Claim Fund[11]
November 2014	$34,708,010	$365,188
December 2014	$35,402,076	$398,664
January 2015	$36,224,693	$420,990
February 2015	$34,304,033	$474,236
March 2015	$37,254,880	$533,220
April 2015	$38,051,533	$607,511
May 2015	$35,502,721	$689,990
June 2015	$39,415,989	$129,074[12]
July 2015	$40,353,901	$205,343
August 2015	$40,894,801	$295,719
September 2015	$41,402,234	$396,603
October 2015	$41,242,876	$503,978

Table 10: Refunds by Operator

Agency	October 2015 Number	October 2015 Value
AC Transit	73	$1,591
BART	356	$4,829
Caltrain	978	$17,023
Golden Gate Bus	108	$783
Golden Gate Ferry	12	$159
Napa/Solano	13	$83
SFMTA	458	$18,514
SamTrans	13	$811
VTA	56	$2,092
WETA	12	$102
Total	**2,079**	**$45,987**

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[10] The reason for drops in the Float Account is delayed payment from retailers, particularly Walgreens, at the end of the month.
[11] If a fare payment transaction gap is not closed within a 21-day period, the cash value associated with the gap is moved from the Float Account to the Participant Claim Fund (PCF). Increases in the PCF correlate with an increase in gap transactions, which is a function of several variables. The PCF is periodically redistributed to operators, who may file claims on it at any time.
[12] The PCF balance dropped this month due to an operator distribution concurrent with their recurring bad debt adjustment.

Clipper Contractor Performance

Table 11: Cubic Cardholder Support Performance, October 1– 31, 2015

	Key Performance Indicator (KPI) Description	KPI Score[13]
1	≥ 95% of calls answered within 3 minutes	95.42%
2	≥ 98% of new and replacement card requests fulfilled within two business days	99.89%
3	≥ 99.5% website functionality availability	100.00%
4	≥ 95% of emails and website inquiries responded to within 48 hours	100.00%
5	≥ 95% of refunds processed within 30 calendar days	98.23%
6	≤ 3 minute average speed of answer	00:00:32
7	≤ 6% calls abandoned	3.12%
8	≥ 95% of unblock actions processed within two business days	100.00%
9	≥ 95% IVR[14] and ACD[15] availability	100.00%

Missed	Achieved

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[13] Cubic added five new customer service representatives to address staffing shortages that affected their ability to meet KPIs 1 and 4 in August and September.

[14] IVR: Interactive voice response, also referred to as the Clipper automated phone system

[15] ACD: Automated Call Distributor, the system that routes calls to customer service representatives.

Table 12: Cubic Device and System Performance, July – September 2015

Monthly KPIs	JUL-2015	AUG-2015	SEP-2015
Accuracy Performance			
CIDs Accuracy By Transaction Count[16]	99.56%	99.28%	99.73%
AVMs Accuracy By Transaction Count	100.00%	99.99%	100.00%
TOTs Accuracy By Transaction Count	100.00	99.96%	99.99%
Device Reliability			
CID1A Reliability	0.10%	0.62%	0.14%
CID1B Reliability	0.05%	0.05%	0.02%
CID2A Reliability	0.00%	0.00%	0.31%
AVM Reliability	4.00%	0.00%	8.00%
HCR3 Reliability	0.21%	0.85%	0.00%
HCR4 Reliability	1.71%	0.00%	2.42%
TOT Reliability	3.92%	3.85%	9.09%
Maintenance Performance			
Average Response Time (hours)	0.00	0.00	0.98
Mean Time To Repair (hours)	0.00	0.00	0.33
Central System Availability			
Clipper Central System Availability	100.00%	99.14%	99.98%
Clipper Data Server Availability	99.91%	99.14%	99.92%
Report Server Availability	100.00%	100.00%	100.00%
Data Store Availability	100.00%	100.00%	100.00%
Clipper Data Server Store Availability	100.00%	100.00%	100.00%
End-of-Day Completion (days)	100.00%	96.67%[17]	100.00%

The above key performance measures were developed to monitor and evaluate the performance of various devices and overall system functions. For example, accuracy performance is measured by the percentage of all card transactions received and processed by the central system by type of device. The objective is to measure the ability of the system to transmit all field transactions to the central system. For definitions of satisfactory (green), marginal (yellow) and unsatisfactory (red) performance levels for all of the categories above, see http://mtcmedia.s3.amazonaws.com/files/Device_and_System_Performance_Level_Rating_Scale.pdf.

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16 Contract-based performance levels are based on these figures, which are based on data reported as of the 1st of the month. Additional transactions reported after the 1st increase the accuracy rate.
17 The end-of-day (EOD) completion KPI was missed due to an EOD process failure that caused EOD to complete shortly after the noon requirement on one day. Missing the noon requirement on one day is sufficient to cause Cubic to miss this KPI for the month.