

A WHITE PAPER COVERING

HOW TO MAKE MONEY WITH PAYPHONES IN THE LARGER SITE

By
Fred L Clark, President
Amtel Technologies

The State of the Industry. The payphone industry in general is not doing well. Revenues are down; expenses are increasing. A few years ago the prospect of dial-around compensation and higher coin rates created a lot of industry excitement. It was short lived. Now cellular, the switch from 0+ to toll free, and E-mail have changed the dynamics. The bottom line for many providers is red. What can be done? The choices are two--either sell or adapt. If you are not willing to accept change and try something new, the best bet is to sell. This paper is directed to those willing to adapt. With the use of new technology, creativity, and a willingness to try new ideas, the future still looks bright.

Coping in the Larger Location. This paper addresses making money in the larger site—locations like large truck stops, convention centers, and large conference center hotels. The obvious things to consider are the number of phones, the type of phones and the number of lines provided. Also, consider the effect of new technology and more efficient management and maintenance tools.

How many Phones? How many phones to use may seem to be the most important question, but perhaps the most difficult to negotiate. The manager, committee, or consultant says they have always had 20, they have 20 locations set up, they need 20, they want 20 and that is the end of the discussion. Perhaps they do need 20. Who knows? Traditional payphone management has been geared toward managing one phone and one line, not large multi-phone sites. Objective data is not always readily available.

The number of phones may seem like the most important issue, but it isn't as important as it may at first appear. If you look at a four-year contract, most of the expense is in operations such as monthly line charges, coin collection and maintenance. Only about 20% of the 4-year cost is the phone itself. I recommend putting in the 20 phones and focusing on other issues.

Type of Phone Used. Phones come in every variety and price range. On the high end are card reader phones with a display and coin return. Price \$ 1500. A standard smart coin phone is \$ 700. An access phone (a calling card or blue phone) is \$ 300. A used one is less than half. In a truck stop an inexpensive phone on the restaurant table is \$ 25. Quite a range of prices. Which one is recommended? Should you install an Internet access kiosk?

Look at today's patterns and trends. Toll free is in, prepaid calling cards are in, calling cards are out, and 0+ is out. Internet usage is also in, but will not be addressed here as it is outside the scope of this paper. However, I do recommend data jacks. They can be added relatively inexpensively. Are Smart Cards just around the corner? I don't think so. In closed environments they are successful, but in large public environments success is still in the future. It is too far away and too risky to commit in a big way. Smart Cards are neat and do amazing things, but payphone providers are losing money here and now, and the investment in Smart Card phones and technology is great. Card reader phones are expensive and rarely used. Use them sparingly.

Coin phones are expensive and high maintenance. Coin collection is expensive, and coin jams and vandalism add to the cost. Keep coin phones to a minimum, but it really depends on the application. Where calling is mainly local, people still use coin and there is no choice. In truck stops less than 4% of the calls are coin. Over 90% are toll free. Two or three coin phones may be enough. In airports less than 15% of the calls use coin.

Access Phones are a less expensive option, handle toll free calling, and in many cases make good sense. Truck stops are high volume locations with most calls toll free. Convenience is important. Putting a \$ 25 access phone on the restaurant table works well. The usage warrants the phone. A large amount of hotel and convention traffic is toll free too. Access phones work out well in many cases.

If your customer wants 20 phones and you think only 5 are warranted, putting in 5 coin phones and 15 access phones might be a good compromise. Inexpensive phones placed in convenient locations are used most frequently and provide the best results.

How many Lines? Phone line costs are the single largest expense and they continue every month. By using a Line Concentrator excess lines can be reduced. Line Concentration relies on the fact that not every phone is in use at every minute. Available lines are shared among available phones. Line Concentrators are either dumb (no, or very little, intelligence is added to the system) or smart. The traditional Line Concentrator is dumb and typical configurations are 4X2 or 8X4; i.e., 4 phones use only 2 lines or 8 phones use 4 lines. If a fifth person attempts to dial, the phone is dead (some of the better line concentrators return a busy tone). Dumb Line Concentrators are somewhat controversial and banned in some states because of safety issues. If the fifth person needs to place an emergency call, an unavailable line creates a safety risk. The phone appears to be available, but it doesn't work. A valid point. I can't recommend the traditional dumb Line Concentrator. A Smart Line Concentrator is a better alternative.

Amtel Technologies makes a product called SMARTY. It is a Smart Line Concentrator and an ideal product for the larger property. It addresses the safety issue with a 911 cut through feature. If a caller places an emergency call and all lines are busy, the oldest call in progress is dropped, allowing the 911 call to complete. The emergency call always goes through. If you think about it, the Smart Line Concentrator is even better than the traditional one-to-one arrangement because not only will there always be a line available, but there will always be a phone available too. With SMARTY, line concentration is not an issue.

SMARTY is available in larger line sizes, or any line size for that matter, which is a more efficient solution for the larger property. A large application may need a 50 X 20; i.e., any of the 50 phones could access any of the 20 lines. SMARTY is also able to route in multiple directions (dumb concentrators are too limited for that). Later, I will show examples explaining the benefits of this. SMARTY is transparent to the end user, which means the user need not adjust his dialing pattern in any way.

Effective Management and Maintenance. Cut down the number of phone lines used, and change the phone mix to match the location and dialing patterns of today. To be successful, you need to adapt and you need to change, but change is risky. However, it is only risky if you're unsure of the results. If you know exactly how many phone lines you've used and need, if you know what the dialing patterns are, and how much coin is used at a site, then you can configure the site profitably and you can defend your position against possible complaints and objections. In short, to be effective, you need the tools to manage the site effectively.

The game plan is to cut down on card phones and coin phones, but these are the phones that have the intelligence to manage. Use the intelligence found in the SMARTY Line Concentrator. SMARTY gives even dumb phones all of the smart phone features and management functions found in the smartest of coin phones. The management features found in smart coin phones are geared toward managing the phone as a single element. The management features found in

SMARTY are geared toward managing the system as a whole while still giving you the ability to see each element.

Sometimes line concentration becomes a contract issue. The property feels short-changed if 20 phones are installed but only 10 lines are used. SMARTY provides the management tools to prove that 99.3% of the time the user will not need to wait for a line. Statistical proof is enough to placate a false perception.

Cost effective maintenance is equally important to effective management. In the payphone industry this generally boils down to how much can be done remotely. Card phones and smart coin phones allow the technician to call in and see the activity. With access phones and other dumb phones this can't be done. SMARTY to the rescue; it lets you monitor even the dumb phones, remotely. SMARTY has remote maintenance tools unheard of in the industry. For instance, if a line outage is suspected, the technician can not only check the call detail of the line remotely, but can also check for dial tone and can check the on and off hook voltage of the line. If everything checks out, he can connect a station port to the line, generate a test call back to the repair facility, and then "talk" back and forth to the box. If a line fault is detected, the technician can "busy out" the line until the telco gets it repaired. This is all done with no trip to the site. Remote maintenance is usually quicker, cheaper, and more effective than on-site maintenance.

Smart Line Concentrators. SMARTY is the only Smart Line Concentrator for payphones that I am aware of. It is a PBX-type device although, unlike a traditional PBX, the user does not need to dial an access code to make a call. Normal dialing patterns are used. SMARTY accommodates any type of public telephone and both analog and digital telephone lines. Digital telephone lines are not generally used in the payphone industry, but consider their use in the case studies below.

SMARTY has a full set of smart payphone features such as answer supervision, voice prompts, call routing, and CDR generation and storage. It includes the entire smart payphone compliment of features, except for coin management. Coin phones already provide coin management so that feature is not duplicated. Program changes, voice prompts, etc., can be changed and administered remotely.

SMARTY is not an inexpensive item, but it will preserve the smart features and functionality of your system, while allowing the use of a cheaper, more practical phone mix. In most applications you can expect the equipment cost to be about the same as a traditional payphone setup. The real value of SMARTY is in reducing operational costs. SMARTY is very good at that. Since operational costs account for 80% of your 4-year cost study, SMARTY is a good choice.

The Economic Game Plan. Use a minimum of card reader and coin phones. They are expensive to buy and expensive to maintain and operate. Supplement the phone mix with inexpensive dumb access phones. Adding a data jack to these phones is cheap and forward-looking. Line concentrate without degrading service or creating a safety issue. The phone line is your largest expense. Configure the system for today's calling habits and the specific location. Rely on SMARTY to enable you to effectively manage and maintain your system remotely.

The following real-world case studies illustrate the effective use of SMARTY to change losing locations into profitable ones. The first is a Convention Center in a large Midwestern city. The second is a large South Florida hotel and convention center. The third is a mid-sized hotel/conference center. The last is a large truck stop.

The statistics used come from real world data. A figure of \$50 per month is used for all phone line charges. \$25 per month covers the coin collection cost. These seem to be reasonable industry averages.

Case Study One. The first case study is a convention center with 36 smart coin phones. 24 of the phones were replaced (and deployed elsewhere) with blue phones. 14 phone lines were dropped. A 36 X 22 SMARTY was installed (36 phones by 22 lines).

Using SMARTY management tools, a traffic study was done to determine whether 22 trunks were sufficient. Since Convention Center usage is spotty, the study covered five full months so peaks and valleys could be observed.

CDR records were remotely polled from the SMARTY system and loaded into the SMARTY trunk analysis software. The following summary table was created from this data. The Simultaneous Trunk Usage Table shows the number of trunks in use at any one time. Column 2 demonstrates that during the 5-month period, one and only one trunk was in use for 302.96 hours. Ten lines were busy simultaneously for 2.47 hours. The maximum trunks in use at any one time was 16, but for only .02 hours (59 seconds to be exact). The last five lines were never needed at all.

The third column shows cumulative time in hours; i.e., one or two lines were in use for 407.32 hours. The fourth column shows that over 56% of all traffic was made on a single line. It says that with a reduction to ten lines, 99.46% of the calls could proceed without anyone waiting for a line.

Armed with this information the vendor cut the 22 lines down to 12 lines. Twelve lines handle 99.87% of the calling time without anyone waiting. With 12 lines, .7 hours or 42 minutes is the total cumulative waiting time for all users spread over a five-month period. 12 lines are sufficient to provide an excellent grade of service.

Simultaneous Trunk Usage Table

Lines	Total Hours	Cumulative Hours	% Usage
1	302.96	302.96	56.58%
2	104.36	407.32	76.07%
3	49.88	457.20	85.39%
4	26.95	484.15	90.42%
5	16.70	500.85	93.54%
6	11.18	512.03	95.63%
7	8.09	520.12	97.14%
8	5.89	526.01	98.24%
9	4.09	530.10	99.00%
10	2.47	532.57	99.46%
11	1.44	534.01	99.73%
12	0.74	534.75	99.87%
13	0.42	535.17	99.95%
14	0.20	535.37	99.99%
15	0.06	535.43	100.0%
16	0.02	535.45	100.0%
17	0	535.45	100.0%
18	0	535.45	100.0%
19	0	535.45	100.0%
20	0	535.45	100.0%
21	0	535.45	100.0%
22	0	535.45	100.0%

The following is a four-year economic analysis of this Convention Center. The first year includes both equipment and operations. The following three years show only ongoing operations.

YEAR ONE--OLD WAY

Equipment	36 coin phones X \$700	= \$25,200
Line charges	36 X \$50/mo X 12 mo	= \$21,600
Collections	36 X \$25/mo X 12 mo	= \$10,800
	Total Year 1 old	= \$57,600

YEAR ONE--NEW WAY.

Equipment	12 coin phones X \$700	= \$ 8,400
	24 blue phones X \$300	= \$ 7,200
	SMARTY 36 X 12	= \$21,000
Line charges	12 X \$50/mo X 12 mo	= \$ 7,200
Collections	12 X \$25/mo X 12 mo	= \$ 3,600
	Total Year 1 new	= \$47,400
	YEAR 1 SAVINGS	= \$ 10,200

YEAR 2-4—OLD WAY

Line charges	3 years 3 X \$21,600	= \$64,800
Collections	3 years 3 X \$10,800	= \$32,400
	Total Year 2-4 Old	= \$97,200

YEAR 2-4—NEW WAY

Line charges	3 years 3 X \$ 7,200	= \$21,600
Collections	3 years 3 X \$ 3,600	= \$10,800
	Total Year 2-4 New	= \$32,400
	YEAR 2-4 SAVINGS	= \$64,800
	4 YEAR SAVINGS	= \$75,000

Quite a dramatic saving is achieved; when operational costs are reduced by two thirds, it makes a big difference. The saving is done with no sacrifice in safety or customer convenience, and with an increase in manageability.

In reality this installation was a retrofit; installation costs should have been taken into consideration but weren't shown. Deduct \$ 3000 from first year savings. Also, maintenance costs should be taken into consideration. Add SMARTY maintenance to the picture, but deduct the maintenance of 24 smart coin phones. Offsetting maintenance costs will have very little affect on the bottom line.

One might argue that cutting the number of lines to 12 may be one way to save money, but why not cut the number of phones to 12, and save even more money? Remember, this is a large convention center. The phones are located with a hand full of phones in several locations spread over three floors. When the meeting in room 101 in the north wing has a break, the participants flock to the four phones on the first floor of the north wing. All phones are busy for 15 minutes, but then all become idle as the meeting resumes. Reducing the number of phones is not a practical solution.

Case Study Two. Case study two is a large South Florida hotel and conference center. It is a real world configuration. This hotel currently has 44 card-reader/coin phones with display and 3 desk card-reader phones. Our recommendation is to replace 28 of the card- reader/coin phones (\$1500 each) with 28 blue phones (\$300 each). These savings alone more than pay for the cost of the SMARTY. The second recommendation is to cut the phones lines from 47 to 12.

Only using 12 lines may seem severe, and it is; but we also recommend a T-1 (digital 24-channel circuit) connection to the hotel PBX. The T-1 is used for overflow traffic during peak periods. It adds 24 circuits for heavy usage timeframes. The SMARTY configuration really becomes 47 X 36, more than enough capacity to address peak calling periods.

Will the hotel PBX be able to handle the traffic? Hotel traffic peaks in the evening. Convention Center and payphone traffic peaks in the daytime. It would be a rare occurrence if the payphone operation overflowed into the PBX during the hotel peak time. Will dial around compensation be lost when toll free traffic overflows into the PBX? Yes it will, but do you really care? The trunk usage table in Case Study One helps explain the conclusion that the overflow traffic will be very minimal. The savings in line costs more than makes up for any lost dial-around revenue.

Will the hotel allow a connection to their PBX? First, the payphone provider must pay for the upgrade cost (will need to add a T-1 circuit). Second, pay the hotel for usage. 10 cents for local and toll free calls and 10 cents a minute for long distance is fair compensation. The upgrade is free to the hotel and they can make a little money by handling some traffic during a slow time of day. It isn't going to make the hotel rich, but it doesn't cost them anything either. The bottom line is there won't be much overflow traffic. Both the hotel PBX and the SMARTY capture CDR so accounting will not be a big factor. The T-1 helps keep payphone line charges to a minimum while giving the customer a perfect grade of service. SMARTY provides the management tools to optimize the trunk configuration.

The following is a 4-year cost analysis of this property. It follows the same pattern as Case Study One.

YEAR ONE—OLD WAY.

Equipment	44 Card-reader/coin phones X \$1500	= \$66,000
	3 Card-reader desk phones X \$ 700	= \$ 2,100
Lines	47 X \$50 X 12mo.	= \$28,200
Collections	44 X \$25 X 12mo.	= \$13,200
	Total Year 1 Old	= \$109,500

YEAR ONE—NEW WAY.

Equipment	16 Card-reader/coin phones X \$1500	= \$24,000
	3 Card-reader desk phones X \$ 700	= \$ 2,100
	28 Blue phones X \$300	= \$ 8,400
	SMARTY 48 X 12	= \$24,400
	PBX T-1 upgrade	= \$ 1,000
Lines	12 X \$50 X 12mo	= \$ 7,200
Collections	16 X \$25 X 12mo	= \$ 4,800
Dial around lost	\$100/mo X 12mo	= \$ 1,200
Charge to use Hotel PBX	\$100/mo X 12mo	= \$ 1,200
	Total Year 1 New	= \$ 74,300
	YEAR 1 SAVINGS	= \$35,200

YEAR 2-4—OLD WAY

Line charges	3 years 3 X \$28,200	= \$84,600
Collections	3 years 3 X \$13,200	= \$39,600
	Total Year 2-4 Old	= \$124,200

YEAR 2-4—NEW WAY

Line charges	3 years 3 X \$7,200	= \$21,600
Collections	3 years 3 X \$4,800	= \$14,400
Dial around lost	3 years 3 X \$1,200	= \$ 3,600
Charge to use hotel PBX	3 years X \$1,200	= \$ 3,600
	Total Year 2-4 New	= \$ 43,200
	YEAR 2-4 SAVINGS	= \$81,000
	4 YEAR SAVINGS	= \$116,200

Again, a very dramatic savings, and again, this installation is a retrofit. We need to add \$4,200 to the first year cost for installation. The 4-year cost using the new configuration is just half the four-year cost of the old configuration. Quite amazing, considering safety is not compromised, there is no change of service to the end user, and the manageability of the site is enhanced.

Case Study Three. This study involves a mid-sized hotel and conference center with 10 regular coin phones. Seven of these phones are replaced with access phones (blue calling card phones). Only two payphone lines are used, but a T-1 link (24 channels) to the hotel PBX is created for overflow traffic. The configuration ends up with more phone lines than phones. Again, do not expect to lose a significant amount of dial-around traffic to the PBX.

YEAR ONE—OLD WAY

Equipment	10 coin phones X \$700	= \$7,000
Line costs	10 X \$50 X 12mo	= \$6,000
Collections	10 X \$25 X 12mo	= \$3,000
Total Year 1 Old		= \$16,000

YEAR ONE—NEW WAY

Equipment	3 coin phones X \$700	= \$2,100
	7 blue phones X \$300	= \$2,100
	SMARTY 10 x 2	= \$6,400
	PBX T-1 Upgrade	= \$1,000
Line costs	2 X \$50 X 12mo	= \$1,200
Collections	3 X \$25 X 12mo	= \$ 900
Dial around lost	\$50/mo X 12mo	= \$ 600
PBX Usage charges	\$50/mo X 12mo	= \$ 600
Total Year 1 New		= \$14,900
YEAR 1 SAVINGS		= \$ 1,100

YEAR 2-4—OLD WAY

Line costs	3 years 3 X \$6,000	= \$18,000
Collections	3 years 3 X \$3,000	= \$ 9,000
Total Year 2-4 Old		= \$27,000

YEAR 2-4—NEW WAY

Line costs	3 years 3 X \$1,200	= \$ 3,600
Collections	3 years 3 X \$ 900	= \$ 2,700
Dial around lost	3 X \$600	= \$ 1,800
PBX Usage charges	3 X \$600	= \$ 1,800
Total Year 2-4 New		= \$ 9,900
YEAR 2-4 SAVINGS		= \$17,100
4 YEAR SAVINGS		= \$18,200

The savings in the mid-sized hotel are not as dramatic as the larger hotel, but the 4-year savings are still over 40 %.

Case Study Four. Case study four is a large trunk stop with 15 coin phones. Since less than 4% of the calling is made with coin, the number of coin phones is reduced to 3. We replaced two coin phones with two access phones, took out the balance of the coin phones, and added 15 desk phones on the most popular tables in the restaurant. Truckers like restaurant phones. These phones included a data jack so a \$40 phone cost is used instead of the \$25 figure usually used. Data jacks can be inexpensively added to nearly any phone as long as SMARTY sits behind it to provide call control.

We started with 15 phones and ended with 20. A T-1 connection ties the SMARTY to the administrative phone system similar to the hotel Case Studies. It is an effective technique for

truck stops, but use care because the dynamics are not the same as in a hotel setting. The peaks in the truck stop usually come in the evenings when there is little administrative usage, but there is still significant traffic in the daytime. Truck stops are very high volume users with toll free accounting for 90+ percent of all usage. Configure the SMARTY trunkage so that very little daytime traffic flows to the administrative PBX. The administrative system is designed to handle administrative traffic; use caution to not clog it up with payphone traffic. The SMARTY management tools provide an easy method to see how much traffic is overflowing and when. A 4-year cost study follows.

YEAR ONE—OLD WAY

Equipment	15 coin phones X \$700	= \$10,500
Line costs	15 X \$50 X 12mo	= \$ 9,000
Collections	15 X \$25 X 12mo	= \$ 4,500
	Total Year 1 Old	= \$24,000

YEAR ONE—NEW WAY

Equipment	3 coin phones X \$700	= \$ 2,100
	2 blue phones X \$300	= \$ 600
	15 desk/data jack phones X \$40	= \$ 600
	SMARTY 20 X 8	= \$11,300
	PBX T-1 upgrade	= \$ 1,000
Line costs	8 X \$50 X 12mo	= \$ 4,800
Collections	3 X \$25 X 12mo	= \$ 900
Dial around lost	\$50/mo X 12mo	= \$ 600
PBX usage charges	\$50/mo X 12mo	= \$ 600
	Total Year 1 New	= \$22,500
	YEAR 1 SAVINGS	= \$ 1,500

YEAR 2-4—OLD WAY

Line costs	3 years 3 X \$9,000	= \$27,000
Collections	3 years 3 X \$4,500	= \$13,500
	Total Year 2-4 Old	= \$40,500

YEAR 2-4—NEW WAY

Line Costs	3 years 3 X \$4,800	= \$14,400
Collections	3 years 3 X \$ 900	= \$ 2,700
Dial around lost	3 years 3 X \$600	= \$ 1,800
PBX usage costs	3 years 3 X \$600	= \$ 1,800
	Total Year 2-4 New	= \$20,700
	YEAR 2-4 SAVINGS	= \$19,800
	4 YEAR SAVINGS	= \$21,300

The 4-year cost was cut by one third with no loss of service. The phone count increased from 15 to 20, maintainability is better, and manageability enhanced.

Conclusion. These examples demonstrate that savings can be achieved in large payphone operations. Payphone providers must adapt to the changing world. Profits will continue to shrink unless new thinking emerges and new technologies adopted. The choice is yours.

For additional information call, write, or E-mail Amtel Technologies.

Amtel Technologies
 1350 NE 56th Street Suite 100
 Ft. Lauderdale, FL 33334
fred.clark@amteltech.com
 954-491-1400