

WHAT'S NEXT IN CALLER IDENTIFICATION SERVICES?

The Journey From Your Parent's CNAM — "Who Is Calling Me?" — To Your Children's NextGen CNAM — "Who Am I Interacting With?"

SUMMARY

Caller Name (CNAM) — that ubiquitous delivery of the calling party name to the landline called party — is slowly morphing into a richer social network experience where the parties — in legacy CNAM terms: the calling and called parties — are sharing contact information to facilitate everyday interactions. These interactions were once confined by telecommunication carriers determining who could see the name associated with an incoming telephone call.

Consumers have taken control of the interaction and are no longer confined to a traditional voice communications where calling party 15 character name is displayed or not displayed by a phone carrier. They are exploding into text message identification, 'check-in' services, address book sharing, social network status, consumer-local merchant interactions, and most important — a personalization of their identity.

Smart phones, social networks and other Web-facilitated services are the enablers of these next generation services. Battle lines are already being drawn between the traditional carriers and the interactive markets industry to decide who will be dis-intermediated from these services that promise a multiplier effect across targeted advertising revenues and management of personal and business identities.



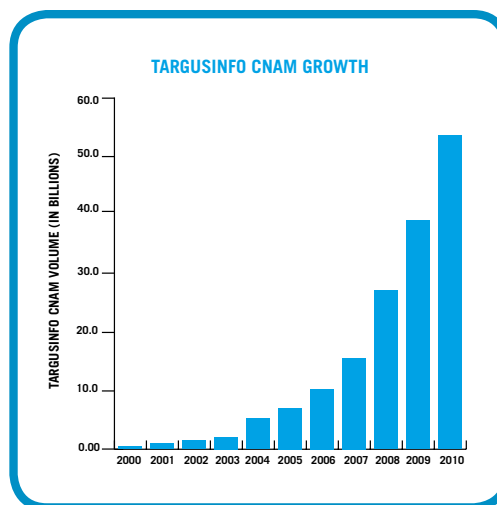
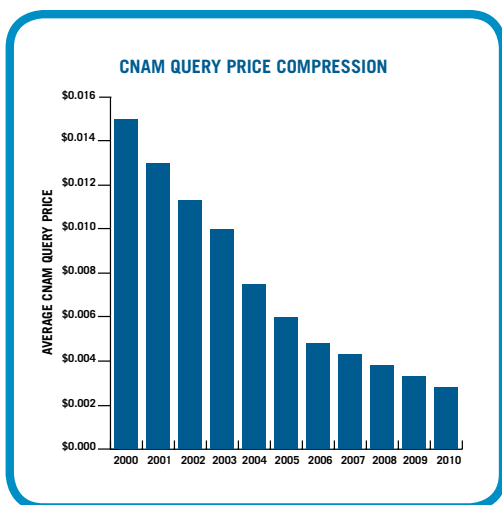


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BACKGROUND: Caller Name Services from 2000- 2010

The Legacy CNAM ecosystem has undergone a revolution since TARGUSinfo introduced a new delivery model in 2000 based upon centralizing authoritative listings in a repository model where all carrier contributors benefited. Up to that point, CNAM was a very profitable Regional Bell Operating Company (RBOC) line item and 'table stakes' for the landline carriers. In 2000, over \$800 million changed hands between the carriers with the RBOCs taking the lion's share due to their dominant footprint and all carriers benefiting by ad hoc customer billing for CNAM. As carriers continued to bundle CNAM into various price packages, CNAM flip flopped from a profit center to a cost center for most carriers. Additionally, the average CNAM service quality also declined as carriers throttled service back to control cost.

TARGUSinfo and its early carrier customers recognized an opportunity here where CNAM costs could be controlled while optimizing the customer CNAM experience. TARGUSinfo disrupted the legacy CNAM ecosystem that relied on carrier reciprocity and cartel pricing with a new CNAM repository model — a model where authoritative CNAM listings were centralized in one entity and CNAM listing contributors shared the benefits of peering each other's listings. The result has been a dramatic fall in CNAM query costs, an increase in carrier queries of CNAM databases, greater subscriber satisfaction and the foundation of NextGen Caller Identification Services. TARGUSinfo also prospered by becoming the dominant player in the delivery of caller name.



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Landline Caller Name Services in 2011

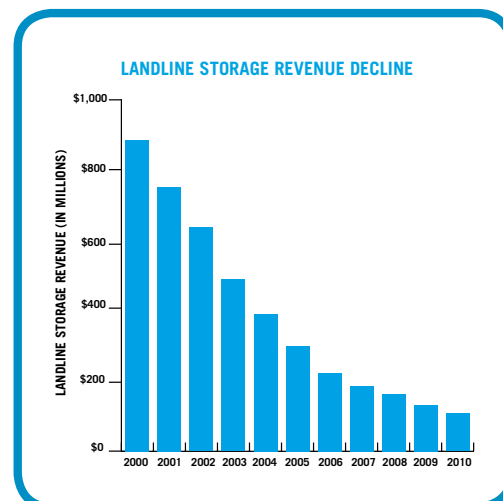
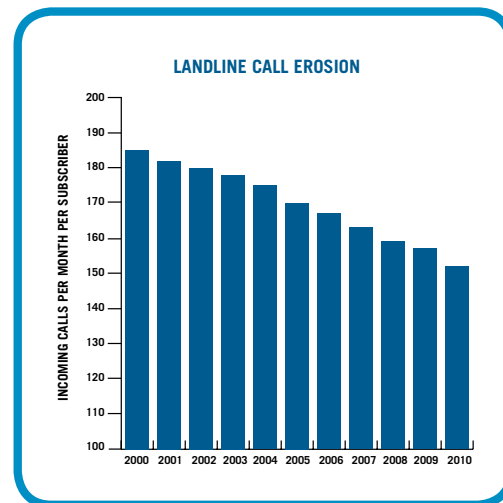
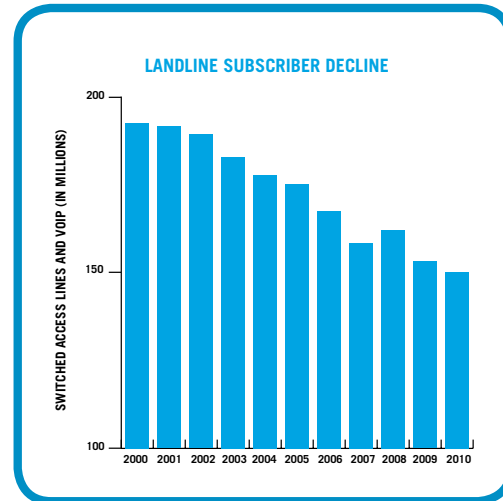
Carriers are really divided into two camps in the delivery of CNAM services to their subscribers:

1. Those carriers who embrace Universal Caller ID CNAM as a ubiquitous capability across every subscriber device — phone, TV, desktop/laptop, etc. — and make it a competitive advantage as a highly visible consumer experience. Coverage is optimized and cost is balanced against ARPU.
2. Those carriers who view CNAM as a necessary cost element to be managed; coverage and quality are conditional on cost and the consumer experience is compromised.

The coverage and quality of CNAM Services differ widely across telecommunications carriers and the gap is continuing to widen due to these factors:

1. Compensation rates for querying have decreased by over 90% since 2000.
2. Carriers are selectively querying and knocking down queries to control costs.
3. Storage and hosting platform vendors are minimizing revenue sharing metrics.

Meanwhile, the TARGUSinfo CNAM Repository continues to be enriched and our carrier clients are enjoying both cost control and a great subscriber experience.





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Mobile Caller Name Services in 2011 and Beyond

The battle lines have been drawn. The interactive markets industry — the Googles, Facebooks and a number of new venture startups — want to control the ‘address book in the sky’ so that they can monetize this direct channel to mobile subscribers. Their primary data model is crowd sourcing and data mining of personally identifiable information. Their goal is to dis-intermediate the carriers. Despite the flow of investment into this arena, no one has succeeded.

One primary reason for failure is lack of access to authoritative subscriber data — trusted, accurate, current identification of the interacting parties where privacy and fair information practices are paramount.

This is where TARGUSinfo excels and we are the only company to successfully launch CNAM to the wireless device with great success as measured by customer penetration and ARPU enhancement.

But CNAM to the wireless device, whether delivered as a network element in CNAP (Caller Name Presentation) or as part of a mobile app, is only the beginning. NextGen Caller Identification Services will deliver a much richer subscriber experience and feature set. These features will include:

1. Identification of parties sending text messages.
2. On an opt-in basis, delivery of home or business address that integrate with mapping and directions services.
3. ‘Check-in’ services to alert your social group as to your location.
4. Identity personalization with ‘my name’ options depending upon the relationship with the recipient.



Current Visual VoiceMail



NextGen Visual VoiceMail



Enhanced Caller ID

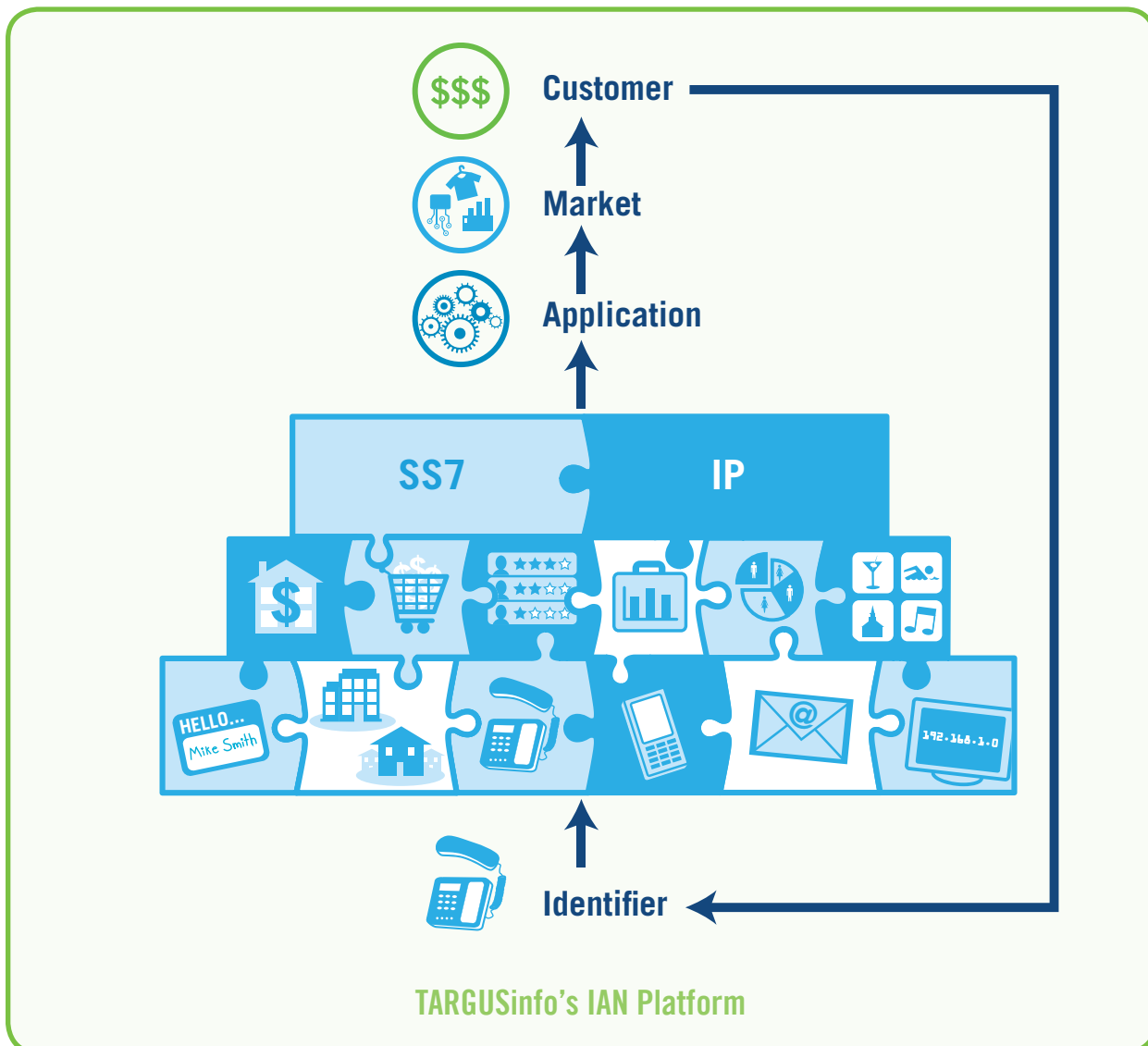


Caller ID Personalization

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These feature rich services will be monetized through higher ARPU or ARPU protection and/or targeted advertising revenue. The mobile carriers have the greatest opportunity to monetize NextGen Caller Identification Services because they control the primary distribution channels to the subscriber base and TARGUSinfo has invested in the carrier infrastructure to fulfill these services.

This carrier infrastructure is fueled by TARGUSinfo's IANSM Platform, the engineering platform that delivers over 150 billion transactions in the telecom and interactive markets industries today. IAN is an acronym for Identifiers/Attributes/Network. In all applications, an identifier — either a telephone number, email address, IP address or any locational identifier — is captured, delivered to IAN where the full identifier layer is exploded, then attributes are appended that fulfill the application and delivered across the TARGUSinfo Network in a consumer friendly and privacy protection manner.



WHAT'S NEXT IN CALLER IDENTIFICATION SERVICES

The keystone of IAN is the Identifier Layer — consumer/business name, physical addresses, telephone numbers, email, and IP addresses all linked and associated. Currently, over 2.3 billion transaction per month feed this Identity Layer to maintain current linkages between all identifiers.



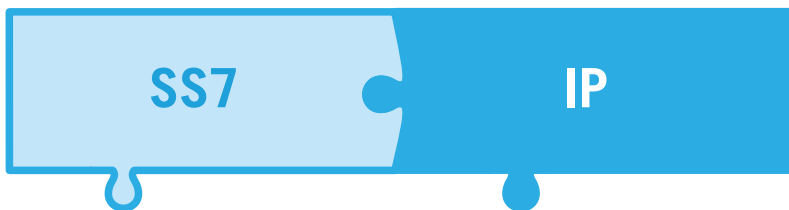
Identifier Layer — consumer/business name, physical addresses, telephone numbers, email and IP addresses

The Identifier Layer links to the Attribute Layer — rich content about consumers and businesses — locational features, demographics, purchasing propensities, audience group membership for advertising and a host of other behaviors.



Attributes Layer — rich content about consumers and businesses

Finally, the selected attributes are delivered over the TARGUSinfo Network, a carrier grade network that delivers to the application in milliseconds.



Network Layer — delivering to the application in milliseconds

The IAN Platform today delivers over 150,000,000,000 responses to client queries to support applications from populating Caller Name to audience targeting to verification to location identification.

Conclusion

The TARGUSinfo philosophy strikes a balance between enhancing the subscriber experience and driving carrier value while ensuring compliance with privacy best practices and adherence to mobile marketing standards.

At the consumer level, our solutions empower consumers to:

- Know who is contacting them.
- Better manage inbound, multichannel communications.
- Selectively opt-in and customize the various persona associated with their anchor identity (usually their mobile number).

By partnering closely with carriers, TARGUSinfo delivers:

- Ubiquitous inbound identification to device types ranging from feature phones to smart phones, with the highest accuracy and broadest coverage in the industry.
- Enhanced attributes and rich content to contact management applications.
- Authoritative data co-developed with the carriers for licensing by third parties.

NextGen Caller Identification Services on mobile devices are attracting significant investment within established companies and start-ups due to the returns from control of the channel to the subscriber; these returns will manifest themselves in ARPU and advertising revenues. The winners will need 3 primary ingredients to fuel their success:

1. Broad access to the subscriber channel for promotion and billing.
2. Access to authoritative data to drive richer content and new applications.
3. Engineering integration to the interactive markets and telecom infrastructure ecosystem.



About TARGUSinfo, a Neustar Company

For over a decade, TARGUSinfo has become the information services provider of choice for communications service providers, partnering broadly across carrier organizations to deliver data-powered solutions. It has been our investment in new engineering systems, data relationships and disruptive data processes, however, that has become the cornerstone for the success of NextGen Caller Identification Services. The IAN Platform has already become a core driver within these services. Further information is available from the TARGUSinfo and Neustar team.

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