



# Unlocking the Data Behind Targeted Linear TV Advertising

# Introduction

Linear TV remains the primary way of reaching mass audiences effectively. According to Nielsen, in Q1 2017, Americans spent over 11 hours per day interacting with electronic media (including TV, radio and digital). The single largest piece of that was linear TV, accounting for nearly five hours.

As well as being the biggest single medium, TV delivers premium video messages in a brand-safe environment, with transparency in delivery and measurement. TV therefore remains one of the best brand-building medium for mass advertisers.

TV is also evolving to embrace aspects that the data revolution has brought – more precise targeting and less friction in the buying and selling of ads – while also avoiding the pitfalls – fraud, lack of transparency, and lack of placement control, leading to unwelcome brand or content associations.

If you're a beer brand, why advertise to Men 21-34 when you can advertise to all beer drinkers 21+? Making TV advertising better using data is to everyone's advantage: advertisers get a better return, media owners use their inventory more efficiently, and viewers get more relevant ads.

The market for targeted linear TV – basically, anything that isn't a traditionally negotiated age and gender deal, is growing. By 2019, \$3.8B of TV spend is projected to be transacted in this way. How will this transformation occur? Through automation of systems and data.

Let's dig in.

**In Q1 of 2017 Americans spent over 11 hours a day interacting with electronic media.**



Pete Doe, Chief Research Officer, clypd

# Data

TV advertising is an important and expensive investment. To determine where and to whom to advertise, top quality measurement is essential. Today, TV usage data is available from a multitude of sources, including traditional research panels, Set Top Box data, and Connected TV's. Information about consumer behavior is also available from survey research and big data sources such as frequent shopper data, credit card transactions, automotive registrations, as well as customer data obtained online and/or via names and addresses.

How do you decide which data source is best to use for your marketing objective? For now, the vast majority of dollars are transacted using Nielsen data as the currency for buyers and sellers. Nielsen measurement for US national TV is based on a sample of 100,000 persons; alternative sources offer results based on millions of homes and devices. Nielsen measurement has two major benefits that the others currently lack — first, the homes are representative of all households and regions of the US and second, real people are measured, rather than just devices that return tuning signals. Using datasets that exclude large numbers of viewers in parts of the country, or making decisions based on device activity without knowledge of who is actually watching, can raise a host of concerns.

Nielsen also has the benefit of market incumbency. Advertisers making decisions about where to spend millions of dollars want consistency in the yardsticks they use to assess the value of their investment. Switching whole budgets away to alternative sources is risky. So far, other data sources have been used for exploratory work. Larger big data tuning sources with connected consumer data enable niche groups to be reached more efficiently either through traditionally planned campaigns or via addressability technology. These sources can also help advertisers understand the effectiveness of their ads in terms of influencing consumer behavior. Many case studies have been presented showing the value of these approaches, but for advertisers to adopt these at scale, different datasets and technology will be needed. For example, ATSC3.0 may be an element here, though that technology is one-way (to the TV) and needs to be used in conjunction with return path capabilities for the measurement loop to be closed.

Thus, much of the activity with advanced audience in TV has Nielsen ratings at the core, enhanced with other datasets connected to the 100,000 homes used for TV measurement. These datasets may be syndicated such as Nielsen/GfKMRI Fusion, NBI (credit card retail transactional data) and NCS (frequent shopper data providing insights into people's supermarket buys) or first-party matched data specific to a particular client. Covering a wide range of consumer activities, these datasets provide a logical first step in moving beyond the traditional age/gender targets used in TV buying for decades.

When considering targeted linear, it is not just the choice of datasets that is important. We also need to look at how they are used and the calculation procedures to report advanced audience impressions. Some issues that arise include estimating the number of people or homes in the target, as well as the number of unique and duplicated impressions viewed, in a way that is consistent and addresses any gaps that may exist in the data. To move the industry towards consistency, clypd cofounded the Advanced Targets Standards Group ([www.atsg.tv](http://www.atsg.tv)), comprising media owners and CIMM's Advanced TV Committee. This group has created guidelines around advanced audience datasets and calculation methods, so that anyone using the same datasets gets the same results.

# Sources

## TRADITIONAL RESEARCH PANELS

nielsen  
.....

## SET TOP BOX DATA

comScore

TIVO

altice

## CONNECTED TV'S

SAMBA TV

alphonso  
The TV data company

LOTAME

sorenson  
MEDIA

## CONSUMER DATA

Nielsen  
Catalina  
SOLUTIONS



POK

axiom

experian

GfK  
GfK MRI

# Guidelines for Advanced Target Deals

- A. Data Ownership/Legal Constraints/Privacy.** There must be no barriers to legal use of the data by all involved parties and all privacy constraints must be observed.
- B. Target Relevance.** The data must describe and represent the target well, whether it is a brand target, a category or a segment based on relevant attitudes. This assessment is subjective to a degree, but should be based on a good understanding of both the campaign objectives and the dataset(s) being used.
- C. Target Demographic Qualifier.** Any advanced target is based on an underlying set of persons or homes. In many cases this is simply “Adults 18+ with Advanced Attribute X” but in some cases other qualifiers of gender, age, income etc may be required. There is no right or wrong way to define this, but whatever is decided should be clearly defined when the deal is being formulated.
- D. Target Size.** Linear TV delivers reach at scale and advanced targets should reflect that. Typically, a target population of 10M (about 3% of the population) for a national linear deal is a good minimum size to consider. For smaller, more niche targets, addressability is an alternative approach that may be considered.
- E. Target Composition.** All targets relate to households or persons, or subsets thereof. If a target is a very high percentage of a demographic target there is little advantage to be gained – e.g. a target of W25-54 in homes that ever buy toothpaste would likely be 99%+ of all W25-54. A better target may be buyers of premium brand toothpaste or heavy buyers. A sensible corollary to the minimum target size recommendation is to require a minimum of 10 million people within the demographic who are not part of the target, to enable sufficient differentiation.
- F. Target Consistency.** Age/gender targets are fairly consistent year-on-year but brand purchase may be less so. Any deal needs to consider the potential for inconsistency of the advanced target.
- G. Connection to TV Data.** The target data must be connected to TV viewing insights of sufficient validity and granularity to enable activation, whether that is for addressable ads or for schedule creation.
- H. TV Data Validity.** There are many TV viewing data sets that could be used for advanced target deals. Most of these data sets do not have MRC accreditation, so buyer and seller need to be careful in understanding the pros and cons of the data source. Key considerations include:
- Viewing metrics, e.g. second vs. minute reporting, viewing streams, person viewing vs. set tuning, impressions, universe estimates
  - Population coverage
  - Data collection methods
  - Data cleaning/editing – gross vs. net sample sizes
  - Projection and modeling steps
  - Consistency of measurement over time
  - The supplier’s error and change management procedures
  - Data granularity, e.g. unit level or aggregated results
  - Metadata availability
  - Timeliness of reporting
  - Availability of advanced audience data connected to the TV data if being used alongside other TV data sources, the congruence of viewing estimates across these sources, e.g. a deal using ACR based indexes for an advanced target and another data source for a demo.
- I. Timeliness and Updating.** Advanced target data sources need to be updated through planning, activation and reporting periods for full transparency.
- J. Buyer/Seller Agreement.** Clearly this is the key consideration in any deal. With advanced targets, a clear description of the target data source, period and target definition is required.



# Forecasting

a key component

Linear TV advertising is a futures market. A media owner guarantees delivery of an agreed number of impressions for a given price, based on its best assessment of how many people will watch the commercial placements aired. For any futures market to work successfully, good forecasts are essential. Both the media owner and buyer need to be confident in its delivery capabilities. Audience forecasting is a critical element in linear TV advertising transactions.

## Factors affecting audience size:

- Population size
- Network coverage
- Viewing trends
- Seasonality
- Program/Genre
- Special events
- On-screen competition
- Promotions (on-screen and elsewhere)
- Off-screen Influences (technology acquisition, weather)

## Factors affecting accuracy:

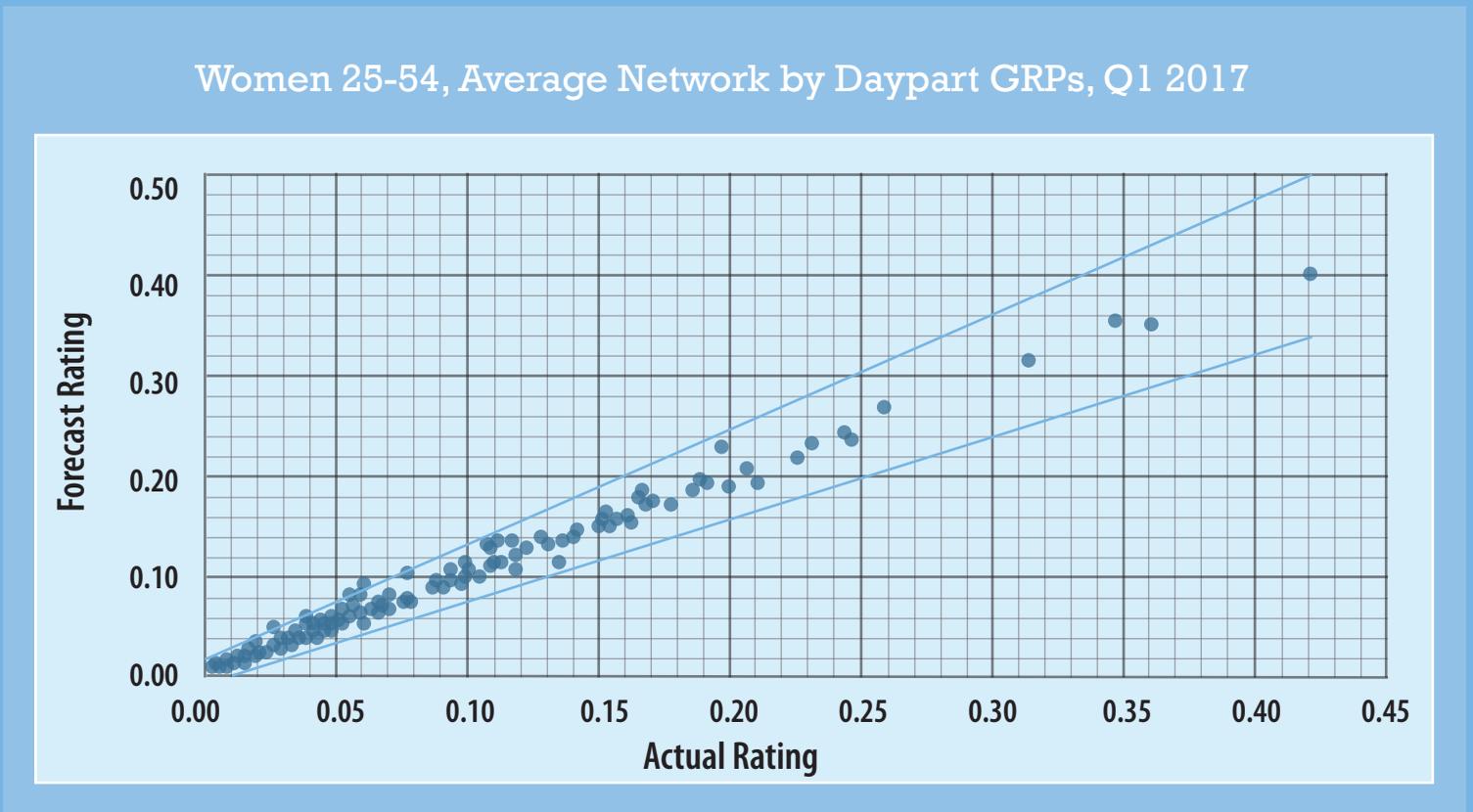
- Availability of relevant data
- Sample sizes/margins of error
- Forecast metrics – audiences vs audience indices
- Timeliness/forecast window (next day, next year)
- Level of detail – program vs network/daypart

**For any futures market to work successfully, good forecasts are essential.**

## Forecasting (cont.)

The chart (Figure A) illustrates that TV audiences can be reliably predicted, showing Women 25-54 across a variety of networks by daypart combinations.

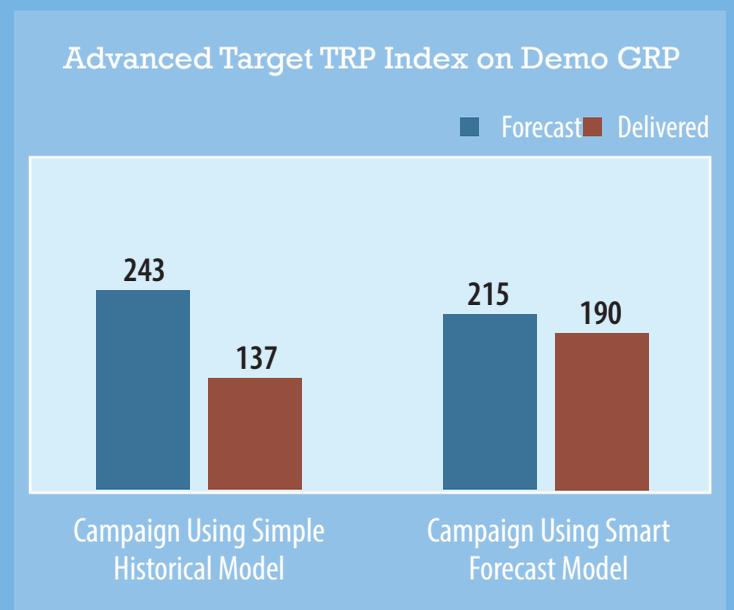
FIGURE A



When creating optimized campaigns for advanced audiences, high indexing inventory is identified – both in terms of audience concentration for the advanced audience and also relative to the inventory cost – the effective cost per thousand (CPM) of the advanced audience. The use of past performance to predict future behavior can overpromise: very high indexing past performance tends to diminish in intensity in future periods and deliver less audience. Forecasts based on indices need to reflect this. At the other end of the spectrum, some inventory can be identified as significantly under performing for an advanced audience and excluded from consideration – this inventory filtering improves both delivery and consistency.

Scheduling using smart forecasting of advanced audiences, taking into account outliers at both ends, delivers more consistency and performance compared with a simple historical forecasting. In the example (Figure B), simple forecasting promises a lot but delivers less as some high indexes in the historical data reduce in the campaign period. Smart forecasting better identifies the real value of inventory.

FIGURE B



Source: clypd/Nielsen National Panel



# Case Study

## Frozen Entree Buyers

This case study describes a single media owner deal, across up to ten networks in the media owner’s portfolio using the clypd platform. The advanced target was frozen entree buyers, defined using Nielsen Catalina data, which combines CPG frequent shopper data with Nielsen National Panel viewing data.

### Deal Constraints

**Budget:** \$750,000

**Primary Demographic Target:** Women 25-54

**CPM:** \$16.15 (equivalent to 46.44M impressions)

**Advanced Target:** Frozen entree buyers aged 18+, Universe = 34.8M

**Timing:** Q4, with even weekly distribution of impressions

**Separation:** No more than 1 unit per hour

### Demo Impressions Share Goals:

**Network 1:** At least 10%

**Network 2:** At least 10%

**Network 3:** At least 10%

**Network 4:** At least 5%

**Network 5:** At least 25%

The clypd platform generates two schedules in the proposal generation stage. The first is a conventional “benchmark” schedule that satisfies all the constraints of the deal listed above, but without any consideration of advanced target impressions. The second “optimized” schedule also satisfies the agreed deal constraints but also delivers the maximum impressions for the advanced target.

Comparing the two schedules (Figure C) gives a good indication of how well the optimizer has been able to improve on a standard schedule. In this case the optimized schedule improves the expected advanced target delivery from 17M impressions to 23.6M impressions, an improvement of 39%. The effective CPM for frozen entree buyers reduced from \$44.13 to \$31.80.

FIGURE C

	Budget	Women 25-54			Frozen Entree Buyers		
		Imps (M)	CPM	GRPs	Imps (M)	eCPM	TRPs
<b>Benchmark</b>	\$750,000	46.4	\$16.15	76.1	17.0	\$44.13	48.8
<b>Optimized</b>	\$750,000	46.4	\$16.15	76.1	23.6	\$31.80	67.7

## Case Study (cont.)

The platform achieves this improvement by selecting a broader set of networks, as well as selecting better performing selling titles and networks (Figure D).

FIGURE D

W25-54 Impressions

	Minimum Requirement %	Benchmark %	Optimized %
Network 1	10	10.3	10.0
Network 2		9.2	8.0
Network 3	10	10.1	10.1
Network 4	10	40.4	29.7
Network 5	5	5.0	5.0
Network 6	25	25.0	25.0
Network 7			3.9
Network 8			6.5
Network 9			1.8

Examining the spread of demographic GRPs (Figure E), we see a much wider distribution of GRPs across networks and dayparts. The total number of GRPs is unchanged but additional Networks 7-9 in the optimized mix account for 8 of the 76 GRPs – about 12%, meaning that the original Networks 1-5 have a reduced weight in the optimized schedule – 68 GRPs.

W25-54 GRPs

FIGURE E

	Benchmark						Optimized					
	EARLY MORNING	DAY	FRINGE	PRIME/LATE	WEEKEND	TOTAL	EARLY MORNING	DAY	FRINGE	PRIME/LATE	WEEKEND	TOTAL
Network 1	2	3		2	1	8	2	3		2	1	8
Network 2				7		7	2	1	0	2	0	6
Network 3		3		3	2	8		3		2	3	8
Network 4	14	11		6		31	10	8		5		23
Network 5	2	1	1	1		4	2	2			0	4
Network 6	5	1		14		19	7	1		11		19
Network 7							1	1			2	3
Network 8							2	1			2	5
Network 9							1	1	0		0	1
<b>Total</b>	<b>22</b>	<b>19</b>	<b>1</b>	<b>32</b>	<b>3</b>	<b>76</b>	<b>25</b>	<b>21</b>	<b>1</b>	<b>22</b>	<b>8</b>	<b>76</b>

The distribution of Target Rating Points (TRPs) is given below (Figure F). The additional Networks 7-8 add 15 TRPs, while Networks 1-5 have an improved delivery of TRPs (from 49 to 53) with the optimized schedule, even with the reduced W25-54 GRP delivery.

Advanced Target TRPs

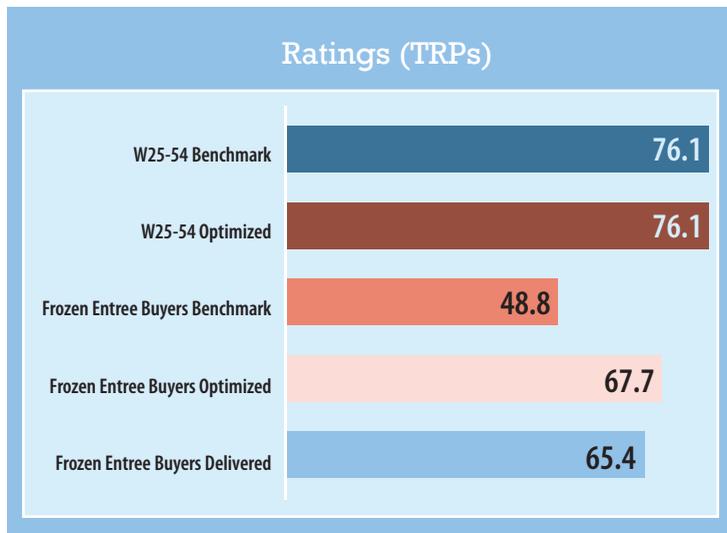
FIGURE F

	Benchmark						Optimized					
	EARLY MORNING	DAY	FRINGE	PRIME/LATE	WEEKEND	TOTAL	EARLY MORNING	DAY	FRINGE	PRIME/LATE	WEEKEND	TOTAL
Network 1	1	2		1	1	6	2	3		1	1	7
Network 2				5		5	3	1	0.4	2	0.4	7
Network 3		4		3	2	8		5		2	3	9
Network 4	8	6		3		17	7	5		3		15
Network 5	1	0.3	0.4	0.4		2	1	1			0.3	3
Network 6	2	1		7		10	4	1		6		11
Network 7							1	2			4	7
Network 8							2	2			2	5
Network 9							2	1	0.1		0.2	3
<b>Total</b>	<b>13</b>	<b>13</b>	<b>0.4</b>	<b>20</b>	<b>2</b>	<b>49</b>	<b>21</b>	<b>21</b>	<b>0.5</b>	<b>15</b>	<b>10</b>	<b>68</b>

## Actual Performance

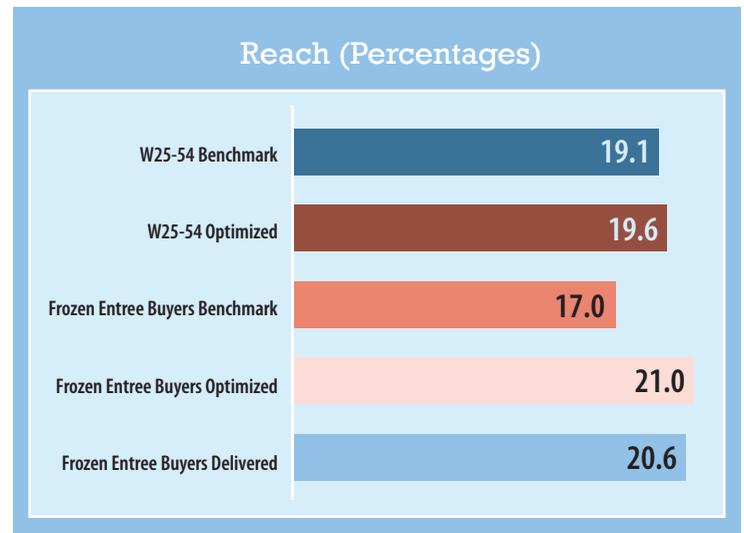
The actual performance of the deal matched the proposal closely, with the W25-54 delivery stewarded to 100% delivery and 65.4 TRPs delivered, 35% more than the benchmark proposal and close to the expectations from the optimized proposal (Figure G). Furthermore, confidential client analysis subsequent to the campaign demonstrated the value of this data-driven approach to linear TV scheduling, showing increased sales that exceeded client expectations.

FIGURE G



We can also look at the effect of optimization on reach. For Frozen Entree Users, the optimized proposal returned a reach estimate of 21.0%, a clear improvement on the benchmark proposal (17.0%). Aside from the expected increase in reach associated with greater impressions/TRP delivery, the use of additional networks in the optimized plan contributes to this increased reach. The actual delivery at 20.6%, in line with the proposal expectations.

FIGURE H

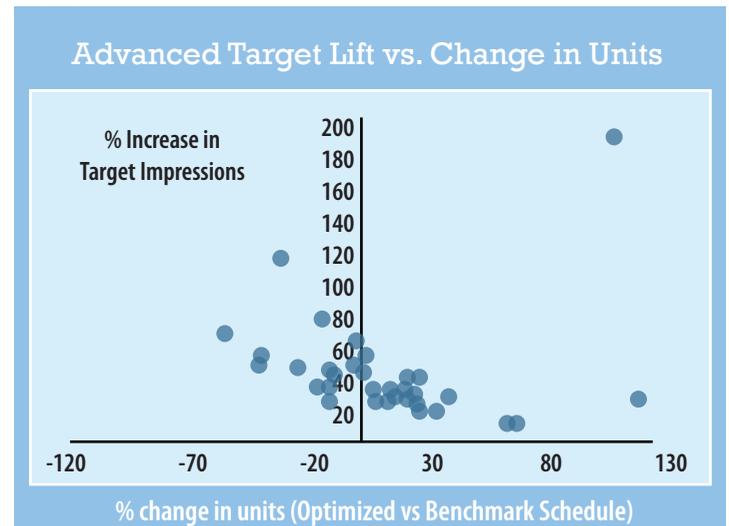


## Effect on Number of Units Selected

The clypd platform selects the best units for the job of optimizing advanced target impressions delivery within budgetary and mix constraints. In some cases, this may mean high rated programs are more likely to be selected, while in other cases lower rated more niche content may be appropriate. When comparing benchmark and optimized deals we therefore see instances when the number of units decreases (when higher rated programming is selected) or increases (for lower rated programming)

The scatter plot (Figure I) illustrates this. It shows results for over 80 campaigns, across categories including Pizza Lovers, QSR visitors, Soccer Fans, Car Decision Makers and Auto Insurance Switchers. In all cases, the deals were constrained by budget and demographic CPM for both the benchmark and optimized campaigns. The results show advanced target impressions increasing between 20% and 180% (typically the better performance reflecting fewer constraints in mix goals) with the number of units varying from 60% fewer to over 100% more

FIGURE I



source: clypd/Nielsen/GRMRI Fusion/Media Owner Forecasts

# Conclusion

We are in the middle of a digital revolution that is changing life for all of us – how we work, shop, find out about the world, and communicate. As far-reaching as this revolution is, some aspects of life will stay the same, including the pleasure of watching great entertainment and events with our friends and family on a big screen at home.

The TV experience has been a large part of most people's lives for decades and advertisers have always found value in the medium because of the way it connects with people. As technology and data have progressed and TV has begun to move beyond the passive box in the corner of the room, there are new opportunities to connect more closely with consumers through targeted linear TV advertising.

For advertisers and media owners to embrace these new opportunities with confidence, there needs to be simplicity in the processes used for buying and selling TV, and clarity in the data and methodologies employed, and this is what clypd is focused on: using data and automation to evolve existing advertising processes and creating new solutions to make TV better for buyers, sellers, and viewers.



clypd is the leading audience-based sales platform for television advertising. Founded in 2012, the company's TV sales platform delivers workflow automation, data-enhanced decisioning and provides media partners with tools to manage their sales efforts. clypd's innovations around advanced audience selling are empowering sales teams to accept new types of demand as well as enhance their existing sales offerings. The clypd team is comprised of both TV and digital advertising experts, which uniquely positions the company to understand and meet the needs of the television industry while leveraging the best strategies from the digital world. For more information about clypd, please visit [www.clypd.com](http://www.clypd.com) or follow clypd on Twitter @clypd.