An update on the new Peoplemeter service

Introduction:

The consolidation of the existing Peoplemeter services - TAM and INTAM - was announced in November 2001. Since then, the Joint Industry Body's (JIB) Technical Committee (TC) was reconstituted under the chairmanship of Mr. B.V.Pradeep of Unilever. The Technical committee constituted two core groups to study two important aspects of the service – The Research Design and User Software.

While the Software sub-committee conducted a user survey and recommended the common user software to the TC, the Research design sub-committee (RDSC) held several meetings with the service on sampling, reporting and other research design aspects.

The document given is a summary of the decisions taken in consultations with the Research design sub-committee (RDSC) as well as the action steps taken by the service in agreement with the JIB TC.

The list of the TC members is given in Annexure 1.

The issues discussed can be broadly classified as:

I. Security measures

II. Validation exercises

III. Sample spread and design

IV. Reporting by the new service

V. Viewership software to be used by the service

VI. Transition plan

VII. Costs of the new service

I. Security measures

The service has taken a number of action steps on the security front:

1. Limited Access to the panel list

   The list of individuals to whom the list is fully accessible include:

   - Head of the Field division in Bombay
   - Head of the data processing division in Bombay
   - Field town heads (for their respective towns only)

2. Panel/Processing software security steps

   - Special maintenance software that does not include printing or cut/paste of address lists.
   - Accessibility to the panel software only via a double password available only to the people mentioned in 1. above. The password is changed every 45 days.
   - All panel names/addresses have been masked in the data processing software.
   - Panel homes identifiable only by codes.
   - It was also emphasised to the TC that the processing software could never and cannot ever be tampered with.

3. Panel home initiatives
    - Panel home education carried out to guard against unauthorised home entries.
    - All panel homes are provided a visitor log that will record visitor details.
    - Suspicious activity will be reported to the TAM regional office via pre-stamped postcards provided to the panel homes.

4. Within the service organisation/s
    - Office access cards for all employees will be provided.
    - Regular penetration/intrusion tests among employees using security consultants.
    - The legal implications of cooperating in activities damaging to the system have been made clear to the employees.
    - The no. of homes per data collector has been reduced. This is to prevent accumulation of large number of addresses with a single person.
    - The possibility of electronic download of data from homes is being actively pursued with a major telecom firm.
    - A reward scheme for field staff in preventing/being alert to a potential security breach is being put in place.
    - All field questionnaires are in the process of being copied onto CDs. The CDs are double password protected. The actual questionnaires are then destroyed.

5. Other details

- On channel/ground activity of any kind during new channel/programme launches will also be closely monitored. This would give the service an idea if anything were amiss.

- If any JIB member had any misgivings on the service, the first port-of-call would be the technical committee. This would prevent sensationalising any issue, would give the service an opportunity to present the correct picture, maintain the purity of the service as well as avoid a possible disruption in service.

- Apart from the panel home list, the sample town names will not be revealed to anyone including the TC members.

II. Validation exercises

- The service will undertake a series of validation procedures. Some of these are already in place as part of the regular panel maintenance while others need to be designed and start getting operational. The details are given in Annexure 2.

- The weekly validations include a validation called the Connectivity validation. In this, reports on the distribution of a channel across various frequency bands (called connectivity reports) are actively used. Thus, for instance, if a channel's reach has shown a significant increase over previous weeks, the first aspect to be checked is the connectivity. In a lot of cases, it is seen that the reach jumps up due to the channel being made available by the local cable on a lower frequency thus enabling more TV sets to receive it.
  The full details of the connectivity validation are given in Annexure 3.

  An external audit of the service will also be undertaken proposals for which have been received from some regular audit organisations. The service is however looking at an independent consultant who has the requisite experience of conducting such specialised audits in international markets.

- The costs that are not part of the regular panel maintenance will be borne by the JIB/Industry.

- A yearly Panel Enhancement Review will also be conducted with the technical committee in order to take feedback on possible improvements in the service.

III. Sample spread and design

Sample spread

- The guiding principle behind the sampling plan was to strive to achieve both 'depth' and 'width' needs. Thus, while more markets are being covered as compared to the existing services, existing markets will also have a larger sample size.

- The present services cover Class I towns (with a population of greater than 1 lakh). The new service proposes to extend coverage to all urban/semi-rural towns i.e. even the towns below 1 lakh.

- This would take the coverage to almost 100% of urban/semi-rural TV owning households; that includes all states apart from Assam/North East and J&K.

- The sampling plan initially started from a clean slate assuming that the service was a new one that was going to be given to the industry. At a later stage, best practices from the existing services were merged ensuring that the best plan is implemented.

- The plan started off with a sample purely proportionate to the TV owning universe across markets across control strata. After this, adjustments were made to ensure a reportable sample and to ensure that the household weights are in manageable range across markets and strata.

- The proposed sample size was 5500 homes initially. This was subsequently increased to 5800 homes to accommodate a separate MP reporting and inclusion/reporting of Orissa.

- The minimum sample for a reporting unit was however reduced from 128 homes to 110 homes to restrict the total sample to 5800 homes. Under normal sample reporting

rates, this reduction will not pose a problem in meeting with the required criterion of 50 sample individuals for a 1/8th demographic analysis in the viewership software.
The full details of the original plan submitted and the proposed final plan drawn in consultation with the RDSC/TC is given in Annexure 4.

- The possibility of giving the industry the full size of the present combined TAM-INTAM panel (7600 meters) was also looked into. However, it was found that this increment did not improve the accuracy of the ratings commensurate with the investment that the exercise called for. Also, the sample size of 5800 met with the JIB requirements as far as error levels were concerned.
  Annexure 5 compares the two sample sizes - 5800 and 7600 with regard to their relative errors. The analysis shows that there isn't a drastic reduction in error levels if the sample size were increased from 5800 to 7600. On the other hand, the increase would call for a significant increase in investments.

- The service will also try to set up an industry pilot study in the rural areas using set meters, if the industry funds the project. Details are yet to be worked out in consultation with the JIB TC.

The Establishment survey

- The NRS will be used as the establishment study

- This would give a larger sample size, cost and operational efficiency and the possibility of customising it to the service needs at a cost.

- The NRS agencies are requested to have an effective recruitment and callback strategy especially for the SEC A segment

- In order to minimise the casualty rate for the service, the NRS agencies would also be requested to ensure that if the required NRS respondent was not available, at least the

TV information would be collected from any 15 years + individual in the household having knowledge of the TV set and it's workings.

- The universe estimates for the service will also be based on the NRS.

Town selection

- The towns for the sample would be chosen using the 'Simulated Annealing' - an Operations Research technique. It has been adapted to the present situation by ACNMI's Global Measurement Science chief, Trevor Sharot.

- This technique will ensure a balance between the parameters of C&S penetration, DD2 terrestrial availability and Socio-Cultural Regions as well as ensuring minimum disruption to existing towns.

- As spelt out before in the section on security, once the towns are selected, the names would be kept confidential and would not be revealed to anyone – this includes any member of the TC.

Sample split

- Within a town, the sample would be split equally between SEC A,B,C and DE. This ensures adequate sample for processing a demographic split like SEC A, whose universe proportion as compared to the other SECs is comparatively small. It must be emphasised that this does not, in any way, bias the ratings since the results are readjusted to their universe proportions at a later stage.

- The CS: NCS sample split would be proportionate to the universe C&S penetration in the concerned strata. The TC also looked into whether a CS:NCS sample ratio of 50:50 was feasible. Doing so however, meant an inflating effect on the associated statistical error and was not agreed to by the TC.

For instance, the error in the 10 lakh + stratum in RoAP (C&S penetration of 89%) would increase by 26% if the C&S : NCS sample proportion is 50:50. The C&S penetration across markets is given in Annexure 6 for reference.

Control parameters

Control parameters are used within every market to ensure panel representation of all parameters that influence TV viewing. The table overleaf gives the list of control parameters that will be used by the new service. The proposed control parameters are identical to the existing one except that SEC A1/A2 has been included as a further secondary control.

Control parameters are further divided as Primary and Secondary parameters.

Primary control parameters are those for which all parameters have to be matched at every single home level – thus for instance, a SEC A, C&S household, with household size between 1-4 individuals, who prefer to watch Tamil programmes and are light viewers of television.

Secondary control parameters are those which are matched on an aggregate level in a market. Thus if 30% of Bombay's population lives beyond the municipal limits, the sample would also follow the same distribution.

Primary Controls	**Secondary Controls**
♦ SEC A/B/C/DE ♦ Terrestrial/C&S ♦ Household size ♦ Language preferred to watch TV programmes ♦ Claimed weight of viewing	♦ SEC A1/A2 ♦ Geographical dispersion ♦ TV type (B&W, Colour) ♦ Remote/Non-Remote

A fresh AID analysis will also be undertaken to check the adequacy of the above control parameters.

Panel representativeness of SEC A

Members had submitted their concerns on the same. To ensure this:

1. The A1/A2 split would be a secondary control parameter (as shown above). This means that within the total SEC A sample, the SEC A1 and SEC A2 sample proportions would be as per their universe proportions.

2. The service would look at Type of dwelling/No. of rooms as a parameter during recruitment.

IV. Reporting by the new service

a) The service will report:
   - The 6 metros (Bombay, Delhi, Chennai, Calcutta, Bangalore and Hyderabad) independently.
   - The rest of states for the above markets as well as other states will be available for analysis across the
     - 10 lakh+ stratum
     - 1-10 lakh stratum
     - Less than 1 lakh stratum
   - Bihar, MP and Rajasthan will be combined for reporting to constitute a Hindi belt reporting. MP can however be analysed independently across the strata given above.

b) The demographic parameters for reporting are to be decided after the weighting method is chosen. While TAM currently uses the cell weighting technique, INTAM uses the rim weighting technique. The service along with the TC will look at the merits of both techniques before progressing.

c) The service will also allow profiling of viewership on the following durables – Type of TV set (B/W, Colour), Music system, Refrigerator, two wheeler, telephone, Washing Machine and Car/Jeep/Van. These durables were selected on the basis of penetration levels and ensuring that they cross the 50 individual threshold on a 6 metro, one-eighth demographic run.

d) In line with international norms, only those channels crossing a certain threshold weekly reach will be reported. For instance, the ACNMI model reports only those channels that have 50 viewers per week over 12 weeks. Channels below this threshold are not included in the viewership software and only hard-copy performance reports

are available. However, the decision rules will be modified to India and a customised model put in place.

e) Along with d) above, the existing rule of ensuring minimum 50 sample individuals for the viewership software to give an output will be maintained.

f) Monitoring data

Both ORG-MARG and TIME monitoring are in consideration to provide monitoring data to the new service. The service has given both monitoring agencies a Standard Operating Procedure (SOP) document. Ability to consistently adhere to the needs expressed in this document as well as ensuring good quality of data to subscribers of the service will help in deciding the final agency.

V. Viewership analysis software to be used by the industry

- As has been stated earlier, a software sub-committee was appointed by the TC to recommend a common viewership software for the new service.

- The sub-committee, after a user study recommended Media XPress as the software of the new service.

- The two concerns however, were Processing speed and Non-availability of the optimiser within Media XPress.

- The service has assured the TC that the speedier version of Media XPress would be available to users by March 1st. A demonstration of the new speedier software was also been presented to the committee. On the optimiser, while the software sub-committee is checking on it's usage in the industry, TAM can offer a separate optimiser - X*Pert - to users.

- In the long term, based on the recommendation of the RDSC, the service will also explore the possibility of displaying a range of viewership based on error levels. The service will also document the viewership range on account of the associated statistical errors and submit the same to the RDSC.

VI. Transition plan

- The service would try and sound users on possible changes in observed data in the course of the transition. This would enable agencies to plan accordingly.

- To enable the transition of meters, the INTAM service would cease on March 31st. The extended date is to ensure that sole INTAM users get time to get used to Media XPresss software. Given that there were differences in methodology, technology etc. between the existing systems, deliveries for brands on the TAM system can show differently from INTAM. To aid the user, the service would evaluate 5 log files given by agencies and try and benchmark the existing systems.

- The service will also undertake group/one-one training sessions to ensure a smooth transition.

- The entire 2001 TAM data will also be given to sole INTAM subscribers.

VII. COSTS

- It is well known that the existing services are operating under severe losses
- The consolidation will incur a lot of investment, especially given the fact that the sample size is going to increase.
- Given the fact that the sample size is going to increase by 60% from 3454 meters to 5800 meters, the increase in costs is expected to be 70% - 80%, covering the costs for the external auditing/coincidentals and one-time meter transition costs.
- The JIB main committee is expected to meet in February to decide on the funding for the expanded new service.

List of annexures

1. List of the members of the JIB's Technical Committee
2. Validation exercises conducted and to be conducted by the service
3. Connectivity as a validation tool
4. Sampling plans submitted to the RDSC and TC
5. Relative error comparisons for sample sizes of 5800 and 7600
6. C&S penetration across markets across strata

Annexure 1

The JIB Technical Committee

Chairman of the Technical Committee - Mr. B.V.Pradeep, Unilever

Group leader of the Research Design Sub-Committee - Mr.Praveen Tripathi, Starcom

Group leader of the Software Sub-Committee - Mr. Ashutosh Srivastava, MindShare

Broadcasters

Organisation	Name
Doordarshan	Mr. K. Kunhikrishnan
Eenadu	Mr. I. Venkat
ESPN	Mr. Karan Grover
Sony TV	Ms. P. Vinayak*
STAR TV	Ms. Julie Peterson
Sun TV	Mr. Sharad Kumar
Turner	Mr. Duncan Morris/ Mr. Pradeep Hejmadi
Zee TV	Mr. Partha Sinha

Advertising Agencies

Organisation	Name
Lintas	Mr. Ashish Bhasin
Madison	Ms. Punitha Arumugam
Mccann	Mr. Srinivas Prabhu
Mediacom	Ms. Jasmin Sorabjee
Mindshare	Mr. Ashutosh Srivastava
O&M	Ms. Kalpana Rao
Rediffussion	Ms. Divya Gupta
Starcom	Mr. Praveen Tripathi
Ulka	Ms. Apoorva Purohit

Advertisers

Organisation	Name
Unilever	Mr. B.V. Pradeep (Chairman)
Asian Paints	Mr. C.R.Mallikarjunadas
Colgate Palmolive	Mr. Manjunath Desai
P&G	Mr. Shashi Mandapaty
Raymond	Mr Paulomi Dhawan

Research Design Sub-committee

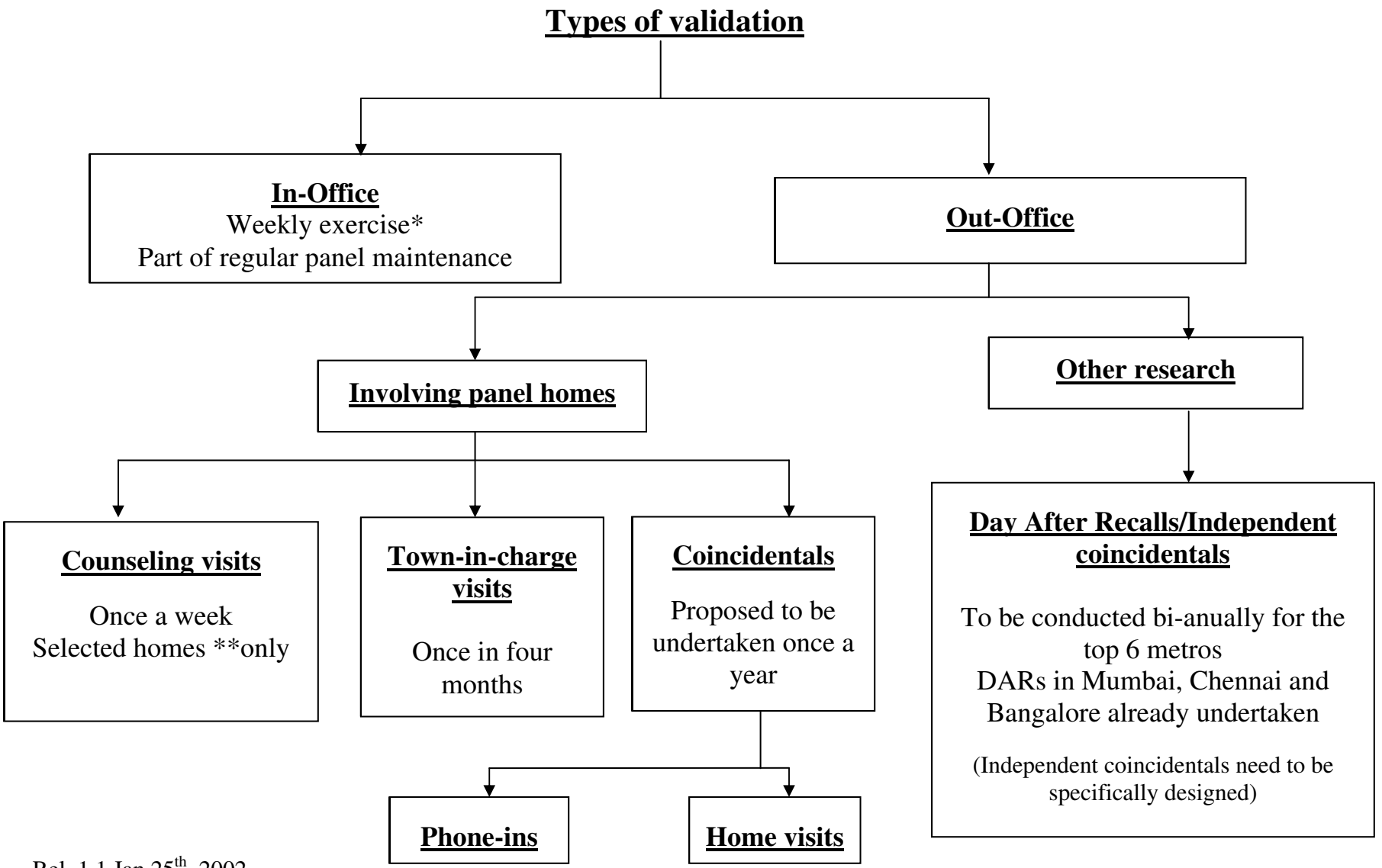
Organisation	Name
Starcom	Mr. Praveen Tripathi (Chairperson)
Colgate Palmolive	Mr. Manjunath Desai
Starcom	Mr. Ravi Moorthy
Turner	Mr. Pradeep Hejmadi
Unilever	Mr. B.V. Pradeep

Software Sub-committee

Organisation	Name
Mindshare	Mr. Ashutosh Srivastava (Chairperson)
Mccann	Mr. Srinivas Prabhu
Mediacom	Ms. Jasmin Sorabjee
STAR TV	Ms. Julie Petersen
Zee TV	Mr. Partha Sinha

* has moved since

Annexure 2



Rel. 1.1 Jan 25th, 2002

* The weekly validation exercises include

- Compliance Validation - e.g. Checks on button pushing by panel home members
- Technical Validation - e.g. Checks on equipment related issues
- Viewing Validation - e.g. Checks for abnormal viewing, continuous viewing.
- Personnel Validation - e.g. Checks by the data collector on household information
- Connectivity Validation – Check on the availability of the channel across frequency bands as detailed in Annexure 3

** Homes selected on the basis of their performance record that might show need for counseling on a specific aspect e.g. proper use of the Peoplemeter remote.

Annexure 3 : Connectivity as a validation tool

The existing services conduct a variety of validation studies every week before the ratings are released into the industry. A key factor that is checked is the 'Connectivity' of the channels. Simply put, connectivity is the availability of a channel in various frequency bands across markets. Th frequency referred to is the frequency at which the cable operator transmits the channel to the households in his area.

The availability of a channel by a household is dependent on two primary factors:

1. The frequency at which the cable operator transmits the channel &
2. The type of TV set in the home.

In the context of availability of a channel, point 2 above holds great importance given that

- 57% of the TV sets in urban India are B/W TV sets and
- B/W TV sets (the mechanical tuner type) can receive only 12 channels.

The frequencies that can be received by B/W TV sets are designated as the Prime band set of frequencies. Distribution of a channel in the Prime band guarantees availability to 100% TV owning homes. Similarly, one has the Colour band available to all TV sets except the mechanical tuner B/W sets, the S-Band available only to Colour TV sets with an S-band tuner, and so on.

How connectivity is tracked:

In cases where the frequency monitoring method of detecting viewership is used, apart from the Panel Homes that are used to record viewership data, there also exists a 'Parallel Homes' set-up. The parallel homes track the movement of a channel across frequency bands on a continuous basis. The data from the Panel homes and Parallel Homes are matched, processed and finally result in an output known as the Connectivity Report of the form shown overleaf.

This report is generated on a weekly basis; the table below showing the connectivity of channel X for the first reporting week of 2002:

Connectivity Report for channel X							
Week 01 – 2002							
Band	**All CITY**	**Mumbai**	**Chennai**	**Bangalore**	**RoMah**	**RoTN**	**RoKar**
Prime	4.6	0.9	0.5	0	15.2	21.3	0
Colour	13	6.1	3.3	8.2	7	0.5	32.8
S-band	29.3	23.4	46.9	47.7	24.4	31.3	2.1
Hyper	2.7	7.4	0	5.7	0	0	0
Uhf	3.9	18.5	0	0	0	0	0
None	46.4	43.6	49.3	38.4	53.4	46.9	65.2

As can be seen the distribution of the channel is reported across the following bands:

1. Prime Band
2. Colour Band
3. S-Band
4. Hyper Band
5. UHF Band

A comparison of channel X's connectivity in week 1 with week 2 proves interesting.

Connectivity Report for channel X							
Week 02 – 2002							
Band	**All CITY**	**Mumbai**	**Chennai**	**B'lore**	**RoMah**	**RoTN**	**RoKar**
Prime	**4.6**	**0.9**	**0.5**	**0**	**15.2**	**30**	**0**
Colour	**13**	**6.1**	**3.3**	**8.2**	**7**	**5**	**32.8**
S-band	**29.3**	**23.4**	**46.9**	**47.7**	**24.4**	**32**	**2.1**
Hyper	**2.7**	**7.4**	**0**	**5.7**	**0**	**0**	**0**
Uhf	**3.9**	**18.5**	**0**	**0**	**0**	**0**	**0**
None	**46.4**	**43.6**	**49.3**	**38.4**	**53.4**	**33**	**65.2**

In week 2, the connectivity has improved significantly in the RoTN market, with the % of homes that don't receive Channel X coming down from 47% to 33% (the 'None' figure).

This means that 14% more homes have received Channel X in week 2 as compared to week 1. Not only this, the % of homes receiving it on the Prime band has also increased from 21% to 30%
The improvement in connectivity would have a direct impact on the reach of the channel.

During the course of the validation however, this data is looked at the other way around i.e. the viewership data is looked at first and then the connectivity data. Thus, channel X might have shown an improvement in reach from 9% to 15% between week 1 to week 2. Since this is a significant improvement in reach, the first factor to be checked is the connectivity. In this case, the improvement in reach is clearly attributable to the increase in availability or connectivity especially in the lower frequency bands and the channel is reported at 15% if the other validations are also clear.

Annexure 4 : Sampling plans submitted to the RDSC and TC

On requests from the RDSC and TC, various sampling/reporting options were provided based on the following parameters:

- Minimum sample size per reporting unit
- Reporting 10 lakh+ separately
- Including Orissa in the sample spread but reporting it along with Rest of West Bengal
- Including Orissa in the sample spread as well as reporting it separately
- Reporting MP separately

Results:

- With all sample spread and reporting enhancements, the sample size required was 6000 meters.

- The requirement was later reduced to about 5800. The sacrifice, however, was that the minimum sample size per control strata was reduced from 128 homes to 110 homes.

- 110 homes is equivalent to 495 individuals @ 4.5 persons per home. Assuming an analysis on a one-eighth demographic, this works out to 62 individuals.

- This then clears the minimum sample size of 50 sample individuals, which is required for an output by the viewership software. There of course, will be drops in this number (i.e. 62 individuals) depending on sample reporting rates.

- A table showing the comparisons between the original proposal and the one revised with inputs from the RDSC and TC is given below:

No.	Parameters	Original Plan	Final proposed plan
1	Sample Spread	♦ 96% of urban TV owning homes ♦ All urban India apart from Orissa, Assam/North-East, J&K	♦ Almost 100% of urban India ♦ Orissa included in the sample plan ♦ Current spread accounts for 53% of urban TV owning homes
2	Sample size	♦ 5500 homes	♦ 5800 homes
3	Reporting	♦ 6 mega-metros reported separately ♦ The Rest of states and other states reported as Greater than 1 lakh and Less than 1 lakh ♦ Bihar, MP and Rajasthan reported as Hindi belt	♦ State reporting enhanced to 10 lakh+, 1-10 lakh and Less than 1 lakh ♦ While Bihar, MP and Rajasthan continue to be reported as Hindi belt, MP can be analysed separately
4	Minimum sample per reporting unit	128 homes	110 homes
5	10 lakh+ coverage	All 10 lakh+ towns to be covered*	- unchanged -

*Basis Census ’91

- In a total sample size of 5800 homes, the top 6 metros account for 1940 homes and the rest of the sample - 3860 homes is allocated across the state markets.

- The market wise split in sample is given in the two tables given below:

Sample sizes in the top 6 metros		
Metros	**Base popln.(000s)**	**Sample (Homes)**
Bangalore	1079	265
Calcutta	1887	265
Chennai	1360	265
Delhi	2270	440
Hyderabad	1155	265
Mumbai	3330	440
6 metros total	**11081**	**1940**

***Base: TV owning households**

Data Source : NRS 2001

Proposed sample sizes across markets by reporting strata*								
Market	*10 lakh+*		*1-10 lakh*		*Less 1 lakh*		*Total*	
	Base popln.(000s)	Sample (Homes)	Base popln.(000s)	Sample (Homes)	Base popln.(000s)	Sample (Homes)	Base popln.(000s)	Sample (Homes)
RoAP	281	110	1460	170	998	110	2739	390
Gujarat	1468	160	685	110	689	110	2841	380
PHCHP	314	110	1183	125	948	110	2445	345
RoKar	0	0	999	110	680	110	1678	220
Kerala	490	110	410	110	318	110	1219	330
RoMah	1051	120	1794	155	1285	120	4130	395
RoTN	481	110	1118	120	1091	110	2690	340
UP	1135	125	1290	125	1278	115	3703	365
RoWB	0	0	805	110	481	110	1286	220
Orissa	0	0	398	110	336	110	734	220
Bihar	164	30	668	60	474	45	1306	135
MP	530	110	1051	110	1270	115	2850	335
Rajasthan	340	45	693	80	685	60	1718	185
State Total	**6254**	**1030**	**12554**	**1495**	**10533**	**1335**	**29339**	**3860**
Hindi Belt	1034	185	2412	250	2429	220	5874	655

Data Source : NRS 2001

Note:

- Base population is Urban TV owning households
- Hindi Belt = Bihar + MP + Rajasthan
- Bihar, MP, UP include the newly carved states of Jharkhand, Chhatisgarh and Uttaranchal respectively
- * Final sample sizes and allocations across markets might be slightly adjusted

Annexure 6

C&S penetration across strata (figures in %)				
Market	**10 Lakh+**	**5-10 Lakh**	**1-5 Lakh**	**Less than 1 Lakh**
Bihar	49	59	39	34
Gujarat	65	58	65	59
Kerala	48	28	56	42
MP	50	47	49	68
Orissa			41	51
PHCHP	71	68	65	61
Rajasthan	31	44	47	52
RoAP	89	80	80	89
RoKar	-	70	66	78
RoMah	44	54	45	46
RoTN	78	77	79	78
RoWB	-	33	47	37
UP	42	36	37	28
Total	**54**	**52**	**56**	**55**

Top 6 metros	% CS Penetration
Bangalore	82
Calcutta	57
Chennai	77
Delhi	60
Hyderabad	68
Mumbai	80

Base population : 40.4 million urban TV owning households

Top 6 metros(included in the above figure) : 11 million TV owning HHlds

Data Source : NRS 2001

Annexure 5 : Comparison of Relative Errors between sample sizes

Proposed sample size - 5800 homes...				
All Demographics				
Rating(%)	1	2	5	10
Sample - Homes	5800	5800	5800	5800
Relative Error	**12%**	**9%**	**5%**	**4%**
Any 1/8th Demographic(e.g SEC x CS)				
Rating(%)	1	2	5	10
Sample - Homes	5800	5800	5800	5800
Relative Error	**35%**	**25%**	**15%**	**11%**
If the sample size were 7600 homes...				
All Demographics				
Rating(%)	1	2	5	10
Sample - Homes	7600	7600	7600	7600
Relative Error	**11%**	**8%**	**5%**	**3%**
Any 1/8th Demographic (e.g SEC x CS)				
Rating(%)	1	2	5	10
Sample - Homes	7600	7600	7600	7600
Relative Error	**30%**	**21%**	**13%**	**9%**

The above calculation assumes 4.5 individuals per home
The calculations are at a 95% level of confidence

As can be seen in the above table, if the sample size is increased from 5800 to 7600 meters, the relative error at a 10 rating reduces by only 1% for an analysis on all demographics
The maximum reduction in error comes at a rating of 1 with the Relative Error reducing by 5% from 35% to 30% for a 1/8th demographic