

# Fusion Standards, Guidelines, and Disclosure:

## How The Media Rating Council Looks At Data Integration

George W. Ivie and James D. Peacock

### **Abstract**

With the growing U.S. interest in fusion-based products, the media research industry is grappling with the question of “standards”—what can we reasonably expect of fusion providers?

To encourage that dialogue, the Media Rating Council’s Executive Director and a technical consultant to the MRC consider what guidelines and disclosures the industry should expect from fusion, based on their experience with the accreditation procedures of the MRC. George Ivie and James Peacock outline some recommended guidelines for fusion development, assessment, and disclosure.

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### Background

The U.S.-based Media Rating Council (MRC) has grown and evolved rapidly over the last decade as its purview has broadened beyond basic audits of the traditional ratings for television and radio. Print, Internet, and multimedia measurement services are also included in today's MRC accreditation processes, and the accreditation processes have broadened to include fundamental issues of research quality. The MRC anticipates that fusion-based media research products will also begin to seek such accreditation.

One of the challenges of fusion is that its methods tend to be treated as highly proprietary. There are a wide variety of different models and techniques, with each vendor claiming superiority for their version of this statistical "black box." As a result, it can be very difficult for potential users to assess the quality of any one system, or to compare competing products on any straightforward basis.

Fortunately, the MRC does have relevant experience, and some relevant guidelines, that would apply to fusion-based products. The existing accreditation process already grapples with products which use significant amounts of ascription and imputation, and what is fusion but a special type of imputation?

### The MRC Itself

The MRC is a non-profit industry association with members representing television and radio broadcasters, cablecasters, print organizations, Internet organizations, advertising agencies and industry trade associations. The MRC's charter is to maintain audience research confidence and credibility with the goal of securing for the industry audience measurement services that are valid, reliable and effective.

Audience measurement services desiring MRC Accreditation are required to disclose to their customers all methodological aspects of their service; comply with the MRC's *Minimum Standards For Media Rating Research*; and submit to and pay for annual MRC-designed audits to authenticate and illuminate their procedures. The MRC's membership evaluates these audits and the MRC Board of Directors grants Accreditation if deemed warranted. In addition, the MRC membership actively pursues research issues they consider priorities in an effort to improve the quality of research in the marketplace.

Audit results and proceedings of the MRC are confidential to foster a cooperative relationship between the ratings services, which voluntarily submit to the Accreditation process, and the MRC membership.

## The MRC's Minimum Standards and Data Integration

The Media Rating Council has always concerned itself with several components of data adjustment, including various forms of imputation and ascription. For example, the current *Minimum Standards* of the MRC (presented in Appendix A of this document) include the following:

**Standard A13:** All weighting or data adjustment procedures utilized by a rating service in the process of converting basic raw data to rating reports shall be based on systematic, logical procedures, consistently applied by the rating service and defensible by empirical analysis.

**Standard B9:** All weighting or data adjustment procedures utilized by a rating service in the process of converting basic raw data to rating reports shall be clearly stated and quantified. This detailed information should be available in each report or reporting system. Appropriate reference material shall also describe procedures and the reasons for such adjustments or weighting.

These guidelines have served the MRC well in past accreditation evaluations for research which has used item ascription, missing-questionnaire ascription, and related forms of editing, imputation and adjustment. These standards cover both the need for reasonable and measurable **quality** (the "A" Standards), and the need for **disclosure** (the "B" Standards).

More recently in the U.S., however, research firms are developing and/or selling products based on the integration of two entirely separate survey or panel databases. While the most recent discussions have concerned the technique known as "fusion," the broader issues are of database integration—how should the MRC, and the rest of the industry, assess the quality of products which are based on the statistical combination of two originally-separate sets of data?

The authors believe that the existing MRC *Minimum Standards* are sufficient for assessment of integrated-data products. But we also recognize that suppliers may need assistance with the interpretation of those Standards in this context.

Thus, this paper attempts to establish reasonable guidelines for suppliers concerning the assessment of data integration **quality**, and the **disclosure** of information for users, and it will serve as a supplement to the existing MRC *Standards*. These guidelines provide the approach that will be used by the MRC in considering the accreditation of integrated-database products.

Readers should be aware that these guidelines have evolved over a period of many months, as the authors circulated earlier drafts among many knowledgeable practitioners of fusion and integration. We are grateful for the many useful comments, which have increased our confidence in the completeness of this discussion.

## **Applicability**

There are many fusion or integration products on the market, for a wide variety of applications. The focus of these guidelines is on products that might pursue formal Accreditation by the MRC, though we believe that many of the principles here could apply more generally.

The MRC believes that the MRC *Minimum Standards* and these data integration guidelines are appropriate for the following types of research products:

- Research which is media-related—i.e. research products that are likely to be used in planning or buying advertising, and
- Research products that are syndicated—i.e., data integration for which the results are made available to multiple customers, potentially both buyers and sellers of advertising, and
- The research databases being integrated must themselves be MRC-Accredited if the integrated product is to be MRC-Accredited.

Most of these guidelines are written in the context of survey- or panel-based samples, although we believe that many of the principles would also apply to other types of integration.

As an aside: We acknowledge that data integration products may be provided as a database alone, or as a database with a proprietary analysis system. MRC accreditation may be considered for an integrated database alone if most usage of the database is through independently-owned third-party software. The MRC membership encourages independent suppliers of those tabulation packages to also submit their products for accreditation.

## **Data Integration Quality Assessment**

As described above, one of the MRC's Minimum Standards (A13) requires that all significant data adjustment procedures "be based on systematic, logical procedures, consistently applied by the rating service and defensible by empirical analysis." Also relevant is Standard A1, which states that, "Each rating service shall try constantly to reduce the effects of bias, distortion and human error in all phases of its activities."

But what does this mean in the context of full integration of independent databases?

Using the rest of the MRC Minimum Standards as direction, the MRC believes that for a supplier to be in compliance with this Standard, an integration product must adhere to the following principles:

- The supplier of the integration product must be able to demonstrate that the variables used for modeling or matching are a reasonably powerful set of variables which are sufficient for the intended purpose. In other words, it's not enough to select the best variables from those available for matching; the set of variables available must also be demonstrably adequate for the matching or prediction task.
- The variables used for matching or integration must be closely comparable in definition, and preferably identical.
- The supplier must have conducted appropriate and documented research on the choice of integration priorities—e.g., on which variables should be used for matching, in what priority or with what weights. If the integration process uses different predictor or matching variables for different types of analysis (e.g., with “on-the-fly” fusion), the supplier must be able to defend its process for assigning models to analyses.
- The supplier must have conducted appropriate and documented research on the extent to which the integration process itself causes distortion of the source data—on the degree to which the original data can be changed by the integration process, on both an average and a worst-case basis. This research is particularly critical for media “currency”—audience measures which are the primary basis for planning and buying advertising in a particular medium.
- The accuracy of the matching or prediction algorithm should have been assessed and considered during the development process. This issue is most commonly studied through “split sample” or “fold-over” tests in which certain known characteristics of a sample are contrasted with the model-based predicted characteristics of that same sample. The assessment should include evaluation of both bias and distortion, with particular focus on measures which are not a direct part of the predictive model, and it should consider the accuracy of the model at all levels of detail (e.g., category vs. brand) that are made available to users. The supplier should be able to defend its choice of accuracy measures, and the testing would have ideally involved repeated studies to determine the extent to which the results are replicable.
- The “matching success” of the method should be considered (if appropriate). If the model is designed to find matching donors and recipients, the frequency with which matches are achieved (or are “close”) for all variables should be known, quantified, and considered as a quality measure during the model refinement process. On a related issue, the supplier must be able to quantify and justify the

extent to which donor respondents (if applicable) are used multiple times during integration, both on average and for worst-case categories of respondents; ideally, this would include a frequency distribution of donor use (including zero usage).

- Data integration can involve single, all-purpose models, or they can involve distinct models for different tabulations (e.g., on-the-fly or composite fusion). The supplier should be able to explain why it made the choice it did, including evaluation of the technical pros and cons of each approach as they relate to the supplier's application.
- The statistical reliability of the integrated database must be quantified to a reasonable degree. At a minimum, broad averages must be developed and provided that help the user understand the extent to which a typical integrated database measure may fluctuate from product release to product release, and suppliers must develop a reasonable method of "flagging" data which is relatively unreliable. Suppliers are further urged to develop computer tools for "on the fly" reliability estimation as a routine part of all computer-based analysis tools for users. *[See also, Standard B8.]*
- If the databases being integrated are themselves dependent upon material amounts of data adjustment (e.g., ascription for item nonresponse), the supplier must make a reasonable effort to minimize the dependence of the model on already-imputed data. If the original databases are under the supplier's control, the supplier should also make reasonable efforts to reduce the scope of that imputation.
- A supplier is expected to have an ongoing program of methodological research in search of quality improvements. No database integration is perfect, and suppliers are expected to make reasonable investments in product quality refinement, including assessment of whether the existence of certain additional or new matching variables could improve the model.
- Also recommended are analyses of the predictive power of the model for each type of data being reported, so as to identify which individual measures are most in need of a refined model.
- More specifically, suppliers are expected to conduct fresh research to reassess the bias, distortion, accuracy, and reliability of the model whenever there are significant changes in the basic method, or in the methods of the underlying survey and panel databases. Even without significant methodological change, suppliers should still update their technical assessment regularly.
- Obviously, data processing quality control procedures must be reasonable, as summarized by existing Standard A2: "Appropriate quality control procedures shall be maintained with respect to all external and internal operations which may reasonably be assumed to exert significant effects on the final results." *[See also,*

*Standards A7, B19, B20, and Section C, “Electronic Delivery and Third Party Processor Supplementary Standards.”]*

- If the matching or prediction algorithm is developed “on the fly” (i.e., the model varies by the user’s specification of variables), the supplier must have made a reasonable effort to assess all of these quality issues for a reasonable sample of likely applications.

## **Disclosure**

In addition to the quality assessments above, the MRC believes that certain types of disclosure to clients are necessary. We recognize that data integration products may involve at least *some* proprietary or confidential techniques, and we’re prepared to consider each situation independently. Nevertheless, we will err on the side of requiring transparency to users; and where full client disclosure would be detrimental to the supplier, we will seek alternatives with assurances of confidentiality (e.g., as part of the annual confidential MRC audit process).

Many of the existing Minimum Standards address the need for disclosure, including Standard B-General:

“A concise description of the survey methodology shall be included in each rating report. This description shall include, but is not to be limited to, a description of the survey technique used, a delineation of the area or areas for which ratings were reported, the sampling procedures used, periods during which the audience data were obtained, criteria for reporting stations, a statement as to whether weighting and/or adjustment factors have been used, and a statement as to whether special interviewing and/or retrieval techniques have been used. Additional details regarding procedures used in sampling (including the selection of samples, callback procedures, substitution procedures), weighting area determination, etc., shall be provided subscribers in methodological supplements which shall be updated periodically (at a minimum, annually) to reflect current policy and practice.”

Here’s how we believe the MRC’s disclosure Standards should be interpreted in the context of database integration:

- Clearly, there needs to be routine and complete disclosure of the basic methodology utilized by the integrated product. This description should either be included as part of the base product, or provided regularly as a separate document or file to all subscribers.
- The description of methodology should also provide a reasonable summation of the methodologies of the underlying sources of data (e.g., for the donor and recipient studies).

- The fundamental nature of the integration process needs to be disclosed as a part of the methodology description, including disclosure of which variables are used for matching or prediction purposes (if relevant). The process by which mismatches are resolved must also be disclosed (if relevant).
- If the integrated database involves its own weighting process, such weighting procedures should be fully disclosed in the description of methodology. Similarly, the disclosure must discuss how respondent weights in the original databases were accounted for in the integration process.
- If the integrated database uses secondary adjustments in order to reduce the distortion from the initial model (e.g., if the initial ratings “currencies” are preserved through post-modeling adjustments), these adjustments must be fully disclosed, including discussion of the limitations of the adjustment.
- The method by which the integrated database is periodically updated must be fully disclosed if any cases from one product release are used again in a future product release.
- The description of methodology should disclose the nature of the testing done concerning bias, distortion, and accuracy, including summary outcomes of that testing. *[See also, Standard B-1.]*
- If the integrated database is based in part on one or more ongoing panels, the description of methodology needs to discuss if and how the samples are unified across time in each of the databases (e.g., how missing days are handled in a TV ratings panel). Similarly, there must be full disclosure of how variables which change over time are handled (e.g., what age is used for a person participating in an ongoing panel).
- Sample sizes and universe estimates for all pre-integration databases should be prominently disclosed, including sample distributions vs. universe prior to weighting for each database for the most common variables used by the marketplace (age, gender, geography, etc.). At a minimum, the disclosure should indicate the sample distributions for each major variable used in weighting, broken out by any separate weighting models and/or within categories of intentionally disproportionate sampling. *[See also, Standards B3 through B6.]*
- The time periods covered by each component database should be disclosed to all users in every routine report or output.
- And, as discussed earlier, suppliers must develop a reasonable method of “flagging” data which is relatively unreliable.

## **Guidelines, Not Standards**

Before concluding our discussion, we want to acknowledge a bit about what these guidelines are *not*.

Some in our industry have urged that there be one standard model for fusion—that there should be industry-endorsed *methods* for integration. That view is tempting in its simplicity, but we don't hold out much hope for consensus around such a “gold standard.” The quality of an integration method depends in part on its intended application; and the methods for integration will continue to evolve as ever-faster computers give us new possibilities.

Thus, we think it makes the most sense for the media research industry to focus on how to *evaluate* integration methods, and on what *disclosures* are reasonable.

As representatives of the MRC, we would also add the need for verification. As we've learned in many other settings, even the suppliers don't always realize how their products are being executed in the real world, and industry-sponsored audits will be as important to data integration as they've been to other forms of media research.

## **Conclusion**

After a careful review, we now believe that the MRC's *Minimum Standards* are, in fact, “up to the task.” Database integration is simply a special type of imputation, and imputation is a fact of life in media research and in the MRC's routine activities.

Nevertheless, we recognize the general nature of the *Minimum Standards*, and we hope these new guidelines will assist the marketplace in the interpretation of the Standards, and more generally, in the assessment of integration products.

## **The Authors**

George W. Ivie is the Executive Director of the Media Rating Council, a nonprofit membership organization based in New York. The MRC has a mission to “secure for the industry ratings which are reliable, valid and effective,” and it pursues that mission through an audit-based process of industry scrutiny, questioning of suppliers, and eventually, accreditation of services which meet the MRC's published Minimum Standards.

James D. Peacock is President of Peacock Research, Inc., an independent media research consulting firm specializing in the technical aspects of ratings methodology. He serves as a technical consultant to the MRC, along with five other current clients. Prior to the founding of Peacock Research in 1996, he was Vice President of Research for the Arbitron Company for 15 years.

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# **APPENDIX A**

## **Minimum Standards For Media Rating Research**

**Media Rating Council, Inc.**

# Introduction

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The Media Rating Council, Inc. (MRC) believes that adherence to the following minimum standards is necessary to meet the basic objectives of valid, reliable and effective media audience measurement research. Acceptance of MRC minimum standards by a rating service is one of the conditions of accreditation by the MRC, Inc. These are intended to be minimum standards and neither they, nor anything in MRC Procedures, shall prevent any rating service from following higher standards in its operations.

The minimum standards listed herein are divided into two groups:

## **A. Ethical and Operational Standards**

These standards govern the quality and integrity of the entire process by which ratings are produced.

## **B. Disclosure Standards**

These standards specify the detailed information about a rating service, which must be made available to users, to the MRC, Inc., and its audit agent, as well as the form in which the information should be made available.

## **C. Electronic Delivery and Third-Party Processor Supplementary Standards**

These standards reflect additional requirements for rating services that deliver audience data electronically and for third-party processors that apply for accreditation.

## A. Ethical and Operational Standards ---

1. Each rating service shall try constantly to reduce the effects of bias, distortion and human error in all phases of its activities.
2. Appropriate quality control procedures shall be maintained with respect to all external and internal operations which may reasonably be assumed to exert significant effects on the final results.

Quality control shall be applied to, but not necessarily limited to, sample selection, sample implementation, data collection, data editing, data input, tabulation and data delivery in printed and electronic formats. It shall include (where relevant) periodic independent internal verification of fieldwork and periodic accuracy checks of meter performance and computer accumulations of base data.

3. The sample design for audience surveys (sample frame and sampling plan) must, to a reasonable degree, accurately reflect the statistical population targeted for measurement. In each rating report, the statistical (target) populations to which measurements are projected must be clearly defined. In instances where the sample frame may exclude part of the "target" population, such deviations shall be described clearly.
4. All field personnel (including supervisors) shall be furnished with detailed written instructions and manuals covering all steps of their work. Such personnel shall be thoroughly trained to assure that:
  - a. They know the responsibilities of their positions.
  - b. They understand all instructions governing their work.
  - c. They will deviate from such instructions only when justified by unusual conditions and that any such deviations will be reported in writing.
  - d. They recognize and will avoid any act which might tend to condition, misrepresent or bias the information obtained from respondents.
5. To improve quality of performance, interviewers and other personnel shall be informed that their work will be periodically checked by internal quality control procedures and by MRC auditors. Every effort shall be made to avoid divulgence to such persons of the checking procedures and the personnel, times and places selected for checking.
6. Detailed written instructions shall be maintained to insure uniform procedures in editing operations. Any editing changes in diaries or questionnaires (additions, deletions or changes) shall be made in an easily identifiable manner so that such editing changes can be checked or audited. Any routines for editing by computer shall be clearly documented.

7. Each rating service utilizing computer systems for processing audience data shall establish procedures to insure that:
  - a. The operations to be performed by the computer system are documented in sufficient detail to specify for each computer program at least: the objective of the program; the input data to be used; the editing and processing steps to be performed, and the output data.
  - b. The computer programs and data are diligently protected from unauthorized manipulation.
  - c. Changes in any computer program are documented in enough detail to identify what is being changed, the reason for the changes, tests performed to confirm the effect(s) of the changes, and the effective date of the changes.
8. The anonymity of all personnel in any way concerned with sample respondents or households shall be preserved.
9. If respondents have been led to believe, directly or indirectly, that they are participating in an audience measurement survey and that their anonymity will be protected, their names, addresses and other such identifying information shall not be made known to anyone outside the rating service organization, except that such information may be provided to:
  - a. The audit firm of the MRC in the performance of an audit.
  - b. The MRC when such disclosure is required in a hearing before the MRC.
  - c. Another legitimate market research organization, for methodological purposes only, at the discretion of the rating service.
10. Experiments in methodology shall not be conducted in conjunction with regular syndicated surveys unless previous independent tests have indicated that the possible effect on the audience data reported will be minimal and unless full disclosure is made as provided in B2 below.
11. Rating services shall take adequate steps to avoid including in audience measurement samples any station, channel, system or network (television, radio, cable or satellite) principal or employee or any member of their households because of the possibility of conscious or unconscious bias in the reporting of their media behavior.
12. In the event that a rating service has identified an attempt to bias measurement results by a respondent's submission of fabricated information, it will do whatever may be necessary to identify and eliminate such cases. In the event that such cases have been included in published data, the service will attempt to assess the effect on results and will notify users should this prove to be of practical significance.
13. All weighting or data adjustment procedures utilized by a rating service in the process of converting basic raw data to rating reports shall be based on systematic, logical procedures, consistently applied by the rating service and defensible by empirical analysis.

## B. Disclosure Standards

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### *General*

A concise description of the survey methodology shall be included in each rating report. This description shall include, but is not to be limited to, a description of the survey technique used, a delineation of the area or areas for which ratings were reported, the sampling procedures used, periods during which the audience data were obtained, criteria for reporting stations, a statement as to whether weighting and/or adjustment factors have been used, and a statement as to whether special interviewing and/or retrieval techniques have been used. Additional details regarding procedures used in sampling (including the selection of samples, callback procedures, substitution procedures), weighting area determination, etc., shall be provided subscribers in methodological supplements which shall be updated periodically (at a minimum, annually) to reflect current policy and practice.

### *Specific*

1. Each report shall include statements calling attention to all omissions, errors and biases known to the rating service which may exert a significant effect on the findings shown in the report.
2. Each rating report shall point out changes in, or deviations from, the standard operating procedures of the rating service which may exert a significant effect on the reported results. This notification shall indicate the estimated magnitude of the effect. The notice shall go to subscribers in advance as well as being prominently displayed in the report itself.
3. Each rating report shall show the number of different households (or individual or other sample units) initially selected and designated to provide audience information and the number among these that provided usable rating data utilized for that specific rating report. If any of the usable interviews or responses have not been included in the final rating report, that fact and a description of the procedure by which the responses used were selected shall be included in the report.
4. Each rating report shall indicate the sample base for the reporting of any separate audience data (households or persons, geographic breakdowns such as Metro and Total Area and demographic tabulations based on age, sex, ethnic origin, etc.). This information is to be provided on a basis of in-tab and, where appropriate, effective sample sizes.
5. Geographic areas surveyed shall be clearly defined in each rating report and the criteria and/or source used in the selection of the survey areas shall be given. (Thus, if the area surveyed is the Metro area as defined by the U.S. Census, the report should so state.)
6. The rating service shall show in a prominent place in each report a comparison of the geographic distribution of sample data with universe data as obtained from primary sources. In the case of individual local reports, the data shall be shown in each report according to counties or reasonable county groupings. In the case of services using continuing samples, the above information shall be published in each report but need be updated only semi-annually.

7. Each rating report shall state that the audience data obtained from the samples used in audience measurement surveys are subject to both sampling and non-sampling errors and shall point out the major non-sampling errors which are believed to affect the audience estimates.
8. With respect to sampling error:
  - a. Each rating report shall contain standard error data relevant to the audience estimates contained therein. Such data shall be presented whether or not effective sample sizes are shown.
  - b. The report shall also contain a non-technical explanation of the meaning and use of standard error as well as a clear guide to how the data may be applied to any given estimate contained in the report.
  - c. The method used to develop standard error estimates as well as the formulas used to compute the standard errors shall be fully disclosed. The service shall provide a basis for calculating sample errors for other audience estimates commonly calculated from data published in its reports, although this material may be included in a methodological supplement rather than the report itself.
  - d. In order for the MRC to verify the accuracy of the standard error and effective sample size approximations contained in a rating report, rating services will be requested periodically to provide a sample of standard errors and effective sample sizes calculated by appropriate standard error formulas. The MRC may use this information as a comparison with results obtained by applying the approximation formulas given in ratings reports.
9. All weighting or data adjustment procedures utilized by a rating service in the process of converting basic raw data to rating reports shall be clearly stated and quantified. This detailed information should be available in each report or reporting system. Appropriate reference material shall also describe procedures and the reasons for such adjustments or weighting.
10. If a rating service establishes minimum requirements for the issuance of a rating report or for reporting stations, or demographic or geographic breaks, the service shall indicate the minimum number of sample returns required for each category.
11. If the rating service becomes aware that a station, channel, system, or network has employed special non-regular promotional techniques that may distort or "hype" ratings and/or exhortation to the public to cooperate in ratings surveys, the rating service shall publish a description of this effort in the appropriate report.
12. If a rating service has knowledge of apparent rating distorting influences such as community power outages, catastrophes or transmission failures, the rating service shall indicate in its reports that such conditions existed during the survey period.

13. With respect to creditable but presently non-accredited surveys conducted by a company which produces a rating service(s) accredited by MRC:
  - a. Efforts must be taken by the company to disclose fully that these other services are, in fact, not accredited by the Council. To avoid subscriber confusion, the minimum requirement is: (1) the report covers for non-accredited services be distinctively different from those used on accredited service(s), and (2) each non-accredited report must carry prominently (on the outside front cover, inside front cover or the opposite page) the following statement:
    - (a) "This service is not part of a regular syndicated rating service accredited by the MRC and \_\_\_\_\_ has not requested accreditation. \_\_\_\_\_ does provide one or more syndicated services which are accredited by the MRC."
  - b. Surveys executed by a rating service for a specific client or clients shall clearly show that the report is of a special nature and not part of a regular accredited syndicated rating service. Such report shall show the name of the client or clients and shall be (1)easily distinguishable from accredited rating reports by use of distinctive report covers, and (2) notice to this effect must be on the outside front cover, inside front cover or the opposite page.
  - c. The MRC accreditation symbol will not be used on any reports which are not an integral part of a service accredited by and subject to audit by the MRC.
14. The rating service shall permit such CPA firm(s) designated by the MRC for the purpose of auditing to review and/or audit any or all procedures or operations that bear upon the development and reporting of audience estimates.
15. Although the anonymity of all personnel concerned with sample respondents or households shall be preserved (as required by A-8), the MRC audit firm will have the right to check with such personnel and any other appropriate persons as part of the auditing process. (The audit firm will in its audit reports maintain the anonymity of such personnel.)
16. Interviewer and supervisor records shall be maintained at least eleven months by the rating service to show: name; date of work; time; type of work; location of work; manner of payment (e.g., full-time staff, part-time staff, hourly, per interview, conditions [if any] under which bonuses are paid, etc.).

17. Each rating service shall maintain, for at least eleven months from the end of the period covered by the report, all diaries and interviews (or a complete facsimile thereof), tape records and/or other primary sources of audience data. These shall include material actually used in the preparation of published rating reports as well as material collected but not used. In addition, each service shall maintain records of:
  - a. All attempts to place diaries or meters, or to obtain interviews or whatever other form of cooperation is required for the research technique used.
  - b. All unsuccessful attempts to obtain information, including- but not limited to - refusals, not at home, cases requiring further discussion and/or correspondence (e.g., with another member of the household), busy signals (phone), and returns from postal authorities.
  - c. Actual or assumed reasons for non-cooperation.
  - d. Which cooperating sample members are original sample selections, and which are first, second, third, etc., substitutions.
18. Returned diaries or questionnaires not put into tabulation for any reason (incomplete, late, poor quality, wrong area, etc.) shall be marked to indicate the reason for rejection and filed as provided under B-17.
19. Each service shall keep documentation of errors of any type in published figures for a period of two years.

Included in such documentation shall be: the length of time the error affected published figures; the effect of the error in absolute and relative terms; its cause; the corrective action taken; and the disclosures, if any, made to subscribers (copies of notices, etc.). If no disclosure was made, the record should indicate the reason underlying this decision.
20. Rating service edit manuals will be made available to subscribers at service headquarters where raw data is made available for inspection.

## **C. Electronic Delivery and Third Party Processor Supplementary Standards**

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### ***General***

In addition to groups A and B above, rating services that deliver audience data electronically and third party processors of accredited rating service data are required to adhere to the following minimum standards. In these cases, many of the disclosures required by the minimum standards can be made within the electronic delivery system.

In this context a "System" refers to the electronic delivery system or the software used by a third party processor to manipulate an accredited rating service's data. A "Third Party Processor" is an organization that reprocesses audience data from a primary supplier to provide alternative report formats, applications, etc.

### ***Specific***

1. The System must have reasonable controls to prevent:
  - a. Users from accessing respondent identifying information.
  - b. Users from altering raw data, such as listening, viewing, readership, product usage or qualitative estimates. Raw data also includes weighting and sample balancing results.
  - c. Users from altering System software.
  - d. Report headings selected by users from being misleading. This includes the use of footnotes and "flags" where necessary to clarify limitations of the data presented,
2. Users of the System should be alerted, and reports from the System must delineate:
  - a. Audience estimates produced by the System having suspect reliability, such as in cases of less than minimum reportability. Minimum requirements for reporting and reliability can change due to the customizable nature of System analyses; in these instances the System shall indicate the minimum number of sample returns required for each analyses.
  - b. Audience estimates originating from statistical models rather than directly from reported audience data with documentation made available to auditors on request.
  - c. Data from non-accredited sources. System reports should clearly disclose these situations using language similar to that in B-13 above.
  - d. Situations of data reissuance due to errors.

3. The rating service or third party processors must have reasonable controls to ensure:
  - a. Users have received the current version of the System.
  - b. Users are notified timely of errors noted in the System and/or data, and where necessary, that corrected software and/or data are distributed timely.
4. Exportation of data from the System generally takes manipulation of the data outside of the control of the rating service or third party processor, therefore this activity will not be accredited. Reasonable efforts must be made to identify and distinguish standard reports of the System from reports based on exported data.
5. The rating service or third party processor is encouraged to supply detailed written instructions, user manuals or on-line help facilities to assist users in properly executing System functions.

## **Additional Recommended Standards**

In addition to adherence to the Minimum Standards, the MRC requests that accredited rating services, insofar as possible, observe the "Recommended Standards for the Preparation of Statistical Reports in Broadcast Audience Measurement Research" and "Standard Definitions of Broadcast Research Terms", both published by the National Association of Broadcasters, but also endorsed by the Media Rating Council and the Advertising Research Foundation.

## **For MRC Minimum Standards for A10 and B2**

In an effort to assist research companies in their adherence to MRC Minimum Standards A10 and B2, the MRC suggests the following:

- I. Each research company is encouraged to provide the MRC a "Journal of Changes" on a quarterly basis. This Journal would include any and all changes in methodology and procedures that the research company is planning to test and/or implement in the next quarter or, if known, beyond. Submission itself, does not imply any waiver of A10/B2.

and/or

- II. Each research company is encouraged to avail themselves of the following voluntary "Live Test Procedures":

### ***Live Test Procedures***

1. Before implementing a Live Test of any of the methods and procedures used to collect audience data, the research company agrees to review such proposed tests with the MRC Staff and two Ad-Hoc MRC Board members (Hereafter referred to as the MRC Group), detailing the objectives of the test and the contemplated procedures. Results of prior tests supporting minimal effects, if available, should also be offered.
2. If the evidence suggests to the MRC Group that the possible effect on Audience Data will be minimal, then the research company will be advised that implementation of the test will not be considered a violation of Minimum Standard A10.
3. Should the MRC Group or the research company feel the need for outside technical counsel, this would first be jointly discussed and outside technical counsel will be jointly agreed on.
4. Should the research company request it, the MRC Group would agree not to reveal the specific nature of these tests other than to the independent auditor working with the research company on behalf of the MRC and, if required, outside technical counsel.
5. The research company would disclose to all subscribers that a test was conducted and reach agreement with the MRC Staff and the MRC Group as to the statement(s) to be made. Disclosure, per Minimum Standard B2, will go to subscribers in advance as well as being prominently displayed in the report itself should the staff and group feel required.
6. It is also understood that, ultimately, the decision to conduct a live test rests with the research company. The procedure described above is intended to assist the research company in working within the framework of MRC Standards A10 and B2.

### MRC Executive Directors

Dr. Kenneth Baker	(1964 – 1970)
Hugh “Mal” Beville, Jr.	(1971 – 1981)
John Dimling	(1982 – 1985)
Melvin Goldberg	(1986 – 1992)
Richard Weinstein	(1993 – 1999)
George W. Ivie	(2000 – Present)

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