Chapter 3

Usage of modern techniques in TV News Production
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3.1 Difference in functioning of the news room of DDK and Pvt. Channels

DD Marathi news has maximum viewership in the state in 2007. The reason is still the common viewers have full trust over the government medium. In the history of 35 years of DD Mumbai news despite of the bomb blasts, historic flooding, bandhs, the news unit continued its broadcast uninterrupted. The news casts are not sensational, and they never create any hype. But at the same time, the news handling, pre and post production is comparatively very poor. DD News has got maximum technical facility as well as the infrastructure, but the department is lacking the good and trained permanent staff. There are lots of problems related to the news casts.

Total Production of News Bulletins from DD Mumbai as on April 2007 is as follows.

<table>
<thead>
<tr>
<th>Time</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.30 AM</td>
<td>10 Minutes</td>
</tr>
<tr>
<td>02.30 PM</td>
<td>10 Minutes</td>
</tr>
<tr>
<td>07.00 PM</td>
<td>15 Minutes</td>
</tr>
<tr>
<td>09.30 PM</td>
<td>30 Minutes</td>
</tr>
<tr>
<td>Weekly Round Up</td>
<td>30 Minutes</td>
</tr>
</tbody>
</table>

- This Centre also produces report of Legislature Assembly of Maharashtra when it is in session.
- Mumbai is the only Regional News Unit of the country which contributes Two live news bulletins every day for Business National News at 01.30 PM (30 Minutes) and at 7.30 PM (30 Minutes).
• Average Coverage done every day
  In Mumbai  20
  Rest of Maharashtra  15

Table : 3.2 Staffing Pattern : DD Mumbai

Permanent Staff :

<table>
<thead>
<tr>
<th>Position</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director (News)</td>
<td>1</td>
</tr>
<tr>
<td>News Editor</td>
<td>2</td>
</tr>
<tr>
<td>Assistant News Editors</td>
<td>2</td>
</tr>
<tr>
<td>Program Officer</td>
<td>1</td>
</tr>
<tr>
<td>Program Executive</td>
<td>6</td>
</tr>
<tr>
<td>Clerical and Others</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
</tr>
</tbody>
</table>

Table : 3.3 Staff On Casual Contract Basis

<table>
<thead>
<tr>
<th>Position</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>News readers</td>
<td>17</td>
</tr>
<tr>
<td>Reporters</td>
<td>9</td>
</tr>
<tr>
<td>Guest Coordinators</td>
<td>3</td>
</tr>
<tr>
<td>Translators</td>
<td>14</td>
</tr>
<tr>
<td>Stringers</td>
<td>37</td>
</tr>
<tr>
<td>Part time correspondents</td>
<td>26</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>106</td>
</tr>
</tbody>
</table>

Table : 3.4 Technical Support

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camera Units</td>
<td>6</td>
</tr>
<tr>
<td>Editing Cut to Cut units</td>
<td>2</td>
</tr>
<tr>
<td>Non linear Unit</td>
<td>1</td>
</tr>
<tr>
<td>Computers</td>
<td>7</td>
</tr>
<tr>
<td>Auto Cue</td>
<td>1</td>
</tr>
<tr>
<td>Studio</td>
<td>1</td>
</tr>
<tr>
<td>Studio cameras</td>
<td>3</td>
</tr>
<tr>
<td>Live Up-linking Facility</td>
<td>Nagpur and Panjim (Goa)</td>
</tr>
<tr>
<td>Clip Mail through MTNL</td>
<td>Pune, Aurangabad, Jalgaon</td>
</tr>
<tr>
<td>DSNG Van for Live Coverage</td>
<td>1</td>
</tr>
</tbody>
</table>

3.1.1 Difference: News room DDK and Satellite channels

While discussing the difference in between news rooms of DD and the Private satellite channels, researcher mainly considered the Regional news rooms, and not the national news rooms. The reason is, on most of the criterions, the national news room has become a professional one in terms of news gathering, editing on content and visuals basis, presentation of the news cast and other aspects. Some aspects of the national news room of DD, which differs from the satellite channel, are professional assessment, treatment and the freedom given to the TV Journalist to treat it rationally without any government interest or priorities. Otherwise, today in 2006, Delhi National news desk is well equipped in comparison with any private satellite channel, in terms of the infrastructure, machinery, modern state of art studios, non linear editing suits and all the facilities for the animation and graphic effects as per the requirement.

Here the functioning of the Marathi News Room in Mumbai has been considered.

Functioning of the DD News room

The functioning of the DD regional news Room is based on the traditional approach and not professional. As public service broadcasters, the responsibility of DD has been increased. But after 1993, the competition was with the private satellite channels, which have no responsibilities of the state broadcasters. To achieve their aim of more revenue and viewership, they started playing many tricks. Until 1999, DD was completely lacking the environment of a professional news setup.

In fact the organizational structure itself can not be used for the real purpose of assembling the news, and giving proper structural packaging to it. Generally in national news room, the news Director is supposed to be the head of the news room, and
he deals with the news affairs on regular basis. In the regional news rooms of the state level Head Quarters, the joint director is in charge, and other news reporters are in the team. Ideally speaking, the news Editors are looking after the content part of the news bulletin. The Producer in charge of the bulletin is supposed to look after the visual aspect of the bulletin.

News editor in every regional newsroom has some assistants, who also translate the news items from PTI or UNI. Even the scripting of any coverage was done by the stringer, and was done by the assistants. Unfortunately, some new practices have been started in the regional as well as the national news rooms.

3.1.2 Report from British Trainer

In 1998, the Broadcasting Corporation of India (BCI) CEO had invited Arnold Miller from the Thompson Foundation to review the situation, in DD on national as well as state level. He spent a few weeks in many news rooms of DD and then had submitted the detailed report April 1998. It is very interesting to study his observations in the report regarding the present scenario in DD.

Mr. Arnold Miller an experienced Broadcaster, served in BBC for more than three decades, on various senior positions. He had visited the national News Rooms of Akashwani and DOORDARSHAN, not only in Delhi, but major places like Mumbai and Calcutta. His observations were related to his practical experience and knowledge. Mr. Miller also visited the News Rooms of Star News, in New Delhi. It was a surprising observation by him that the new Prasarbharati is a "Sleeping Giant.

Observations about DD Set Up

However, it was accepted by Mr. Miller, that “Both the DD and AIR have great strengths, vast audiences, and big network of
stations. The latent talent, power and ability are huge.” The following observations were revealed in detailed discussions in detail with him.

1. The main problem with the DD News Room set up on regional as well as national level is that the presenters on DD News are only readers, and not journalists. They never used to learn the things and basics of TV journalism. It was always posed that they are old, experienced and hence were treated as professionals. The presenters, until 1999 were never seen on the locations or at the places where some news is happening. Due to this strange way of working, DD telecast was anchored by the stars, and not professionally trend TV Journalists anchors.

2. Most of the news editors or so called presenters with a very bad voice for broadcasting, used to record the voice-overs for the news stories. This was unbearable for the viewers.

3. The picture quality of the stories used to be very poor due to several reasons. One of them was the cassettes were used for more than ten to fifteen times, when an international standard of usage is five to six times maximum. Some times there was no coordination between the Producers, reporters and the cameramen. The cameramen many times were found unaware of the type and requirements of the coverage, and no proper briefing was given to him.

4. DD news has been presented and produced like a Radio vision, and not Television news. The coverage always carried natural ambient sound, but it has not been used in the final editing of the package. The reasons are unknown, but this is happening until 2006, in Marathi news produced by Sahyadri, channel of DD. The fault can be from the sides, cameraman or the producer. The problem lies with the non answerability and accountability. This
gives the impact of the unprofessional production of the News cast.

5. While using the term Radio vision, there is one more strange way to edit the stories at least in the National and regional news Rooms. The producers and visual editors prefer to get the written script from the reporter, and then the visuals are poured in. This can only be called Radio vision or radio with Pictures. This affects the audio visual quality and in some cases the synch of sound and picture is not matched perfectly. This could create the chaos and some times the legal problems could occur. Most of the time, the news story is seen from content point of view only and not in visual terms. On the contrary the story for television should be seen visually first and then the script can be written accordingly. The same style is still adopted by the BBC. Not only in DD, but in NDTV, AAJ Tak, Sahara, and even Star News, the same style (content first and visuals later) has been adopted.

6. The Graphics support to any News story is not only poor, but pathetic. On DD Marathi Sahyadri channel, the usage of Graphic and animation is almost nothing. The usage is done only to show some figures of weather and temperature and end credits for the news cast. Even in 2006, the graphic support has never been taken by the production of DD news on regional level as an alternative to the visual in emergencies or to enhance the coverage. In most of the DD regional news, the graphics and animation services are not even available due to several reasons for 24 hours. The graphic artists were not trained according to the international standards.

7. The situation of video library of General News room in DD new Delhi was not in proper shape until 1998. The reviewer Arnold Miller once experienced himself by asking the librarian to search for the video tape of the visuals of post assassination of Indira
Gandhi, from over ten thousand tapes, took more than 30 Minutes, and still untraceable. He had termed this situation as 'unprofessional and useless'.

8. The situation in DD Mumbai, Sahyadri, is much better in video library, as there are seven thousand tapes and highly professional librarian working for so many years with the fullest of the ability. DD Mumbai has a large tradition of so many years of production, since 1972. The programs have been made on a large scale and with so many subjects and variety.

9. The Production Control of News in National news set up is another example of old traditional and out dated process, with a lot of confusion and chaos. Lot of shouting and mixing the contradictory commands by the news producers adds to the worst impact on the viewers.

10. Each and every unit send for the coverage of any event or news, was not accompanied by a Journalist, but only a stringer cameraman. There was no control on the situation until the mobile phones came in to practice.

(Source: Original Document: Report by Arnold Miller, to, CEO, BCI)

An example of the basic difference, in dealing the news could be self explanatory. There was a big accident in 2003, on the tracks of Konkan Railway, in the remote area of Sidhudurga District. The information came to the news Room of NDTV and DD Mumbai, at around 12.30 in the afternoon. Both the offices of these channels are situated in the same area of Worli, in Mumbai. NDTV Correspondent was provided a special helicopter which took off at 1.10, she took the aerial shots of the accident location at 2.30 and the visual was put on air at around 4 PM on the same afternoon. Aaj Tak had already made a three Dimensional graphics of the train accident to give an idea of how the accident
took place, to its viewers. Other channels started implementing their strategies accordingly. DD news was just carrying a dry news item without any visual or even a photograph. Only telephonic interview of DD reporter (Stringer in Ratnagiri) was carried, who had not even reached to the spot in 4 hours time. This was the difference in treating the urgent or emergency news coverage.

3.1.3 Process of News Gathering DD RNU

- Important events are located well in advance. The Joint Director decides the importance and assigns it to the staff Cameramen in regular meeting in the morning. Out of the total coverage, the official cameramen accept the number of coverage according to the availability of the cameramen. Generally the official cameramen on roll are deputed to the coverage of the ministers or the most important events. Generally, for DD, still all the coverage of the VVIPS from the Central government is given top priority, even though there is no news value in the event.

- The rest of the coverage is handed over to the Stringers on the panel. Some times the most important coverage like natural calamities, accidents or some happening related to the common people at large, are even given to such a stringer, who is not professionally trained in news coverage for television, but the only eligibility criterion is his availability.

- After receiving the coverage News editor writes or corrects the script, and hands it over to the News Producer.

- Generally, the production assistants are also hires on the casual contract basis just like any labor hired on the daily wages basis This person edits the visual with his own limited knowledge, wisdom and experience.
There is no check on the quality of the edited visual, and sometimes the grave mistakes go on air, but the system never stops; the news cast goes on in the hands of the news reader.

DD Mumbai has recruited the news readers just for three times in the history of 33 years of Mumbai DD. More than 80 percent of the existing news readers are not journalists by profession. They were selected on written test, interview and, reading and screen test. This affected adversely and badly on the quality of the news cast.

After the script is edited, it is read by the reader, on the screen. For this the old and out dated auto queue is used to teleprompt the reader. The speed control is the reader’s hand, and not in the news editor or producers hand.

The voice over packages is edited very shabbily and shoddily, some times without sound, bites, and most of the time just the mute visuals, without any ambiance and surrounding sound. This can only be called the Radio Vision, and not a professional television. It is a great misconception which is still prevailing in the news rooms of DD. Any body could do the voice over of any news story. This is not in case of any television station or company in European or American countries. The well trained reporters, and the news editors, who have full knowledge of the electronic media, and the understanding of the news alone are permitted to do the voice over recordings. The Professionalism on Voice over is lacking in the DD news casts.

Very limited official reporters are deputed on the job. It’s improper to depute the untrained staff on reporting, because most of the times, the trainee reporters are not aware of the news, they don’t have the capacity to interpret, analyze, and communicate as well. This affects the quality of the news cast.
many times, and DD lags behind in comparison with the other satellite channels.

- In DD news room of the national network, still a very good usage of the visual aspect and graphics as well as animation is made in the news casts. But in the regional level news casts, the situation is very bad. Practically very little use of graphics or animations to enrich the visual aspects of the news cast is done.

3.1.4 Reasons, for the faulty process of news gathering

1. Lack of proper judgment about its own staff and its strength.
2. Inability to cope with the new changes and change yourself accordingly.
3. No proper use of the huge infrastructure and big set up of the cameras and other production facilities.
4. No structural changes due to long pending promotional policy, and long pending court cases between the employer and the employee.
5. Prevailing sense of frustration and demoralization amongst the staff.
6. Bad HR policy, which never showed the ray of hope for the staff.
7. No support from the immediate senior officers, against the interference from the politicians.
8. Any professional News set up it always wanted the liberty to work and freedom to decide the treatment to be given to the news on the merit it deserved. But in DD depended on the approval of the seniors, which not only killed the time but also affected badly because of the poor perception of the bosses, who most of the time were devoted to some group or parties in politics.
3.1.5 Regional and national News: Difference in Working

1. The English News channels of DD or any Satellite channels focus and foot print is bigger than the regional language channels, as it reaches more than 100 to 150 countries.

2. The focus of the English Channel depends up on the satellite utilized for the transmission and beaming, in most of the time English known viewers.

3. Other languages have not such a big focus or impact in comparison with English. Even the Hindi language can be understood in a few countries in the Asian continent. This is the reason which affects the reach, focus and market values as well as the market revenue available for the Hindi Channels.

4. The focus and the market conditions automatically affect the scope of revenue and the economy of the regional language channels. The English Channels get the bigger impact and response from global level market in comparison with any national or regional channels.

5. In India, Hindi gets maximum response on national level, as it is understood in most of the states. But it is the regional language, which gets maximum response, and creates impact, as there is the formation of the states on the regional language basis. For example, Gujarat: Guajarati language, Maharashtra: Marathi, Tamil Nadu: Tamil. Karnataka: Kannada, Andhra: Telugu language. There are more than 14 states out of 28, which speak and understand Hindi, along with their regional hundreds of dialects.

6. The regional languages Television News have got bigger response, than any other national or universal languages. This has been proved in the survey conducted by the researcher.
7. The main differentiating factor in making the News casts is the issues related to the people and their lives. The regional channels include very few and most important national and state level issues, but they stress the regional and local issues. The Hindi News casts on the television always give importance to the national issues. The English TV News is made with an intention to present it before the global audiences and the viewers.

8. The production values are also different for the regional as well as the national and global TV Channels. The English News cast has to maintain the quality of the global market in competition with the other channels across the world.

9. In India, most of the channels in regional languages have been brought by the bigger group of channels. The bigger channels were succeeded in English and Hindi first, and then the regional channels were brought. The reason was simple; to establish the national market first, then enter at the same time in the global and the regional market with ready infrastructure and the marketing team.

10. The production process of newscast in any language is more or less the same. The reason is that the packaging of the news depends on the content, visuals and the fine post production. The language makes hardly any difference on its slick and finished product of the news channels.

11. The global appeal is always received by the English News cast, but Hindi channel is well appreciated in most of the Middle East and Asian countries. The real problem comes in case of the regional channels like Gujrathi or Marathi entertainment and news channels, because the audience is restricted and limited. This creates the same impact in the same economic proportion on the revenue generation. Since
the channels are market and technology driven, the quality of production is also affected because of this market response and revenue generation.

3.1.6 Functioning of the news Room of the Pvt. Channels.

Before discussing the functioning, the researcher studied the organizational set up of the Private news channels, Zee Marathi Channels News (The then Alpha Marathi), ETV Marathi News, and Newly started Star Maza Marathi News. The comparison on all the required working conditions can not be made for the following reasons:

1. DD Marathi News and ETV Marathi News are not 24 hour Marathi News Channels. Zee Chovis Taas and Star Maza have recently became 24 hour news channels.

2. The staffing requirements and patterns are entirely different, according to the duration of telecast, number of bulletins and the basic format of the Infotainment and 24 hour news channels.

3. The process of producing the hourly news casts and round the clock news casts are entirely different. The news packages are edited and re edited to take the viewer forward, after every 15 minutes in 24 hour news channels and in entertainment channels hourly time slots are given to the news casts.
Table: 3.5 Staffing Pattern: ZEE Marathi News

<table>
<thead>
<tr>
<th>Position</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head of the News</td>
<td>1</td>
</tr>
<tr>
<td>Executive Producer</td>
<td>1</td>
</tr>
<tr>
<td>Assignment Producer (Input)</td>
<td>2</td>
</tr>
<tr>
<td>Desk/ Bulletin (Output) Producer</td>
<td>2</td>
</tr>
<tr>
<td>News Bulletin Producers</td>
<td>9</td>
</tr>
<tr>
<td>Associate Producers/ anchors</td>
<td>12</td>
</tr>
<tr>
<td>Production Executives</td>
<td>4</td>
</tr>
<tr>
<td>Reporters (Mumbai)</td>
<td>8</td>
</tr>
<tr>
<td>Reporters (Rest Maharashtra)</td>
<td>6</td>
</tr>
<tr>
<td>Stringers (state)</td>
<td>20</td>
</tr>
<tr>
<td>Cameramen</td>
<td>8</td>
</tr>
<tr>
<td>Video Editors</td>
<td>10</td>
</tr>
<tr>
<td>Graphic Artists</td>
<td>3</td>
</tr>
<tr>
<td>Administration &amp; accounts</td>
<td>4</td>
</tr>
<tr>
<td>Coordination</td>
<td>8</td>
</tr>
<tr>
<td>Library</td>
<td>3</td>
</tr>
<tr>
<td>Facility</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>106</strong></td>
</tr>
</tbody>
</table>

(Source: Researcher, as the Head of Alpha Marathi Channel News, Mumbai)
Table: 3.6 Staffing Pattern: ETV Marathi News

The following is the staffing pattern in Mumbai and Hyderabad.

<table>
<thead>
<tr>
<th>Position</th>
<th>Mumbai</th>
<th>Hyderabad</th>
</tr>
</thead>
<tbody>
<tr>
<td>News Coordinator</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Input Editor</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Output Editor</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Bulletin Producer</td>
<td>-</td>
<td>9</td>
</tr>
<tr>
<td>Copy Editor</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>Reporters</td>
<td>12</td>
<td>-</td>
</tr>
<tr>
<td>Reporters (Rest Maharashtra)</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Stringers</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>Stringers (Rest Maharashtra)</td>
<td>30</td>
<td>-</td>
</tr>
<tr>
<td>Anchors</td>
<td>-</td>
<td>7</td>
</tr>
<tr>
<td>Associate Producers</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Production Associate</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Production Assistants</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Cameramen</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Camera Assistants</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Graphic Artists</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Video Library</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Coordination/ facility</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Admin / Accounts</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>96</td>
<td>78</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>174</td>
<td></td>
</tr>
</tbody>
</table>

(Source: News Coordinator, ETV Marathi News, Mumbai & Hyderabad)

- ETV news Network has 12 channels in its family. There is a Core Committee on News, headed by the chairman of the group. Three senior most editors and officers from every channel are deputed on this core committee to take the policy decisions and maintain the coordination within all the channels for the content and visuals, on International, national and state level news casts. Since the earth station of the group is situated in Hyderabad, (Andhra Pradesh), the Production Center is also at the same place.
• For ETV Marathi, Three senior most officers are called News Coordinators. Two are at Hyderabad, and one is deputed in the capital of Maharashtra, Mumbai.

• There are no separate visual editors in this set up. The Copy editors are trained to edit the copies and visuals on the specially designed computer software.

• The total production of all the 12 regional language news channels, as well as anchoring and presentation of all the news casts and live programs are done from Hyderabad.

• Since Mumbai is the capital of the state, the infrastructure and technical facilities for production of live discussions and talk shows are provided in Mumbai studio.

• ETV Marathi News has the maximum number of Reporters and stringers in Mumbai as well as in the rest of the state. This helps them to gather maximum number of news items and visuals.

• This channel has a good centrally coordinated pool of the content as well as visuals, which is commonly used in all the 12 regional channels

• Comparatively, the production quality, editing and packaging is on an average level, because the copy producers are not highly qualified and trained for the duties. Professional packaging does not mean cut and paste of visuals on the content. It needs to be understood by the

• Editorial seniors that packaging includes use of good graphics, latest software, and controlling the blend of content and visual.

**Star Maza (24 Hour Marathi News Channel)**

• The basic feature of Star Maza is, except the decision making higher authority on editorial pr Production level, all the faces of reporting are fresh and new.
• The manpower is well distributed as per the requirement and not on the traditional base.

• The Trainees have also been recruited well in advance to create the second in command batch of TV Journalists

**Table: 3.7 Staffing Pattern: Star Maza**

<table>
<thead>
<tr>
<th>Position</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deputy managing Editor</td>
<td>1</td>
</tr>
<tr>
<td>Executive Editor</td>
<td>1</td>
</tr>
<tr>
<td>Content editor</td>
<td>1</td>
</tr>
<tr>
<td>Senior Producer</td>
<td>1</td>
</tr>
<tr>
<td>Producer</td>
<td>5</td>
</tr>
<tr>
<td>Associate producer</td>
<td>3</td>
</tr>
<tr>
<td>Deputy Producer</td>
<td>2</td>
</tr>
<tr>
<td>Assistant Producer</td>
<td>9</td>
</tr>
<tr>
<td>Reporters (Mumbai)</td>
<td>12</td>
</tr>
<tr>
<td>Reporters (Rest Maharashtra)</td>
<td>10</td>
</tr>
<tr>
<td>Trainees</td>
<td>15</td>
</tr>
<tr>
<td>Stringers</td>
<td>20</td>
</tr>
<tr>
<td>Cameramen (Mumbai)</td>
<td>15</td>
</tr>
<tr>
<td>Video Editors</td>
<td>8</td>
</tr>
<tr>
<td>Graphics</td>
<td>6</td>
</tr>
<tr>
<td>Video Library</td>
<td>4</td>
</tr>
<tr>
<td>Facility</td>
<td>6</td>
</tr>
<tr>
<td>Admin/ Accounts</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>125</strong></td>
</tr>
</tbody>
</table>

*(Source: Senior Producer, Star Maza, Mumbai)*

**Table: 3.8 Staffing Comparison (2007)**

**24 Hour News Channels**

<table>
<thead>
<tr>
<th>Channel</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zee Chovees Taas</td>
<td>106</td>
</tr>
<tr>
<td>Star Maza</td>
<td>126</td>
</tr>
</tbody>
</table>

**Table: 3.9 Infotainment Channel News (2007)**

<table>
<thead>
<tr>
<th>Channel</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD Marathi Sahyadri</td>
<td>96</td>
</tr>
<tr>
<td>ETV Marathi News</td>
<td>174</td>
</tr>
</tbody>
</table>
One can easily compare the above chart with the set up of DD Mumbai, for the following reasons:

1. The number of news bulletins by private channels was more than the DD news Marathi, but the number staff of the private channels was much less in comparison with that.

2. The infrastructural set up of DD news can not be compared with the private, because the DD set up is very huge.

3. The manpower hired on casual contract on DD news is much more than that of any private channels.

4. The professional ability and strength of the private channels staff is highly professional, carefully monitored and properly trained according to the policy and style of the respective private satellite channel.

5. The output of the DD news in Marathi is hardly 65 minutes a day, and private satellite channels staff usually produce new bulletin for five minutes every hour, and five news casts of 30 Minutes a day. In addition to this they produce city centric and national bulletins of 30 minutes a day. This comes to minimum two hundred minutes production a day.

6. The responsibilities in the DD organizational set up is divided in to editorial and production level. But in satellite channels the producer has to look in to the content aspect as well as the visual editing also.

   Basically there is a very systematic approach and scientific professional view in designing the news rooms and the organizational structure in the Pvt. Channels. They have two clear cut and well defined depts. The Resident Editor in the case of the State level bureaus or Executive Editors in the case of the HQ are in charge of the news departments. They are captain of the ship, and chief of content as well as the visual aspect and the live presentational of the bulletins in every aspect. The executive
producer is deputed to help him/her in every visual aspect in practice.

A. Input

In the input, all the coverage coming from various parts of the state and the world are assembled. This includes the following functions:

- Assigning the day to day coverage to the reporters, according to their bits.
- Deputing the reporters for the coverage on emergencies.
- Making the schedules of the ETA (Exact time of the arrival) of the reporter, and inform him/her to output desk or to the headquarters.
- Getting the edit suits booked or to make them available for the reporters to save the time.
- Sometimes to keep the rough script or the copy ready with the graphic support.
- To instruct the graphic artists to make the animations according to the need of the story made by the reporter.
- After the reporter comes, the story is edited properly with the help of the graphics and bites, and either submitted to the output or the feed is given to the Headquarter through satellite.
- Even making the proper chart of the main happenings of the next day is a job of the Input Section. The allotment of the events, and confirmation of the proper equipment provided to the reporter is the responsibility of the Input Editor. It was done by the translators appointed on casual contract basis in the news room to help the news editor.
B. Output

In Output, the final shaping is given to the matter and the packages going on Air, with the proper editing and the process. This includes the following:

- After the package is received from input, the output decides the proper placement of the story in the bulletin.
- The sequence as well as the script of the Anchor, is written and checked by output.
- The head lines are prepared, based on the main crux of the story and proper words are selected for the head line with the visual or graphic support.
- The repetition of the story, its time and number and duration is also decided by output.
- But this is not the commonly applicable rule to have these sorts of arrangements, because in some channels, there are not these input and output segments, like ETV, they have common desk, and they always allow everybody in the news room to operate the content and to edit it along with the visual part of it.
- The executive producer of the news cast is responsible for the visual aspect of the bulletin. Other producers and assts are reporting to him/her in the process of the production of any news cast.

C. Difference in the handling the news.

Doordarshan has been no longer the public Govt. broadcaster after the Prasarbharati was formed. But it seems that no political party in India ever wanted to loose the control over such a powerful tool and weapon. Even in the Janata Dal regime, those who took initial steps, rather initiated the foundation of the autonomy, became the pat and parcel of the Indian national
Congress, but still they could not change the mentality of the ruling politicians at all.

The basic ways of the operations in the most powerful broadcast house, DD, was not changed at all. The main reason was, no govt. wanted the autonomy to be given to the Prasar Bharati in a real sense. Even the cut through competition was started by that time because of the Pvt. Channels; DD never could compete to these Pvt. Channels because it never had autonomy in practice. Those who enriched the DD News room, left the organization, and joined other Pvt. Channels.

Before going in to the details of the changes that took place in the technology of DD, we must have a look at the changes on the global level Television.

### 3.1.7 Changes in the coverage and Post Production

As we have seen, earlier the news reels were shot without sound, even moved by hand by the cameraman, and the sound effects were added with music, after the shooting. This was the technical treatment exactly like producing a cinema. The news reporting was done on the specific locations on 35 mm film cameras. The cameras were big and heavy, and difficult to handle. The 16 mm film had arrived by the time of the First World War, but was not utilized for the news coverage purpose for the unknown reasons. In America, NBC was using 35 mm Film and CBS was using 16 mm film for the news production. CBS technicians were called unprofessional, but in future, all the TV companies had to go for 16 mm alone. BBC and ITN started using 16 mm films for news in 1958.

Sound recording on the location was a big problem. The reporter was not seen as a Journalist, or author of a piece. To match the sound recorded on location with the visual was a big and time consuming exercise.
Shooting a visual on film was a very time consuming and expensive affair. The television pictures were needed to be recorded on some reusable objective. This was made possible in 1956, when Ampex developed the first video tape recorder. In the earlier stage, the tape used to break many times, and the speed was too fast to manage the recording. The two inch tape format remained there popular from 1956 to 1970, and then the C format of one inch tape was introduced. In early 1993, first digital format allowed the cassettes to come in different widths. BBC used D-3 format and in 1994, D-5 format cassettes were released.

The video tapes of μ-matic nature were developed by SONY, which recorded broadcast quality pictures on three quarter inch magnetic tapes. For the recording purposes, a heavy portable recorder was used. By this time the satellite transmission was also gradually developed. Telstra 1, the first commercial telecommunication satellite was launched in 1962, which started sending unedited Television pictures from one place to other. This saved time, energy and cost of physical movement of the pictures shot on film. Before the satellite was launches, the speed of transmission through the transatlantic telephone cable to transmit visuals was just one minute a day. But with the usage of the satellite that time this technology was very expensive, (in 1965, 3000 $ per hour.)

The ENG and Satellite proved to be the major boost to the television industry, which could give better quality pictures and even the sending receiving process was made easier than before. ENG technology was getting advanced day by day, and the camcorders came in to existence.

This was a fantastic combination of the camera and recorder, which was most useful for the purpose of the news coverage. The first camcorder was developed in 1977, but the
innovations in VHS and S-VHS, as well as Hi 8 were the further developments. This 8 mm tape was utilized by the TV journalists in the Gulf War in 1992. This was the beginning, where all the functions of the cameraman, Sound recordist, reporter and others in the crew were to be performed by one person with the camcorder alone. In future, in the era of convergence, same multipurpose and multi skilled TV Journalists are going to be needed.

3.2 Major changes in the coverage techniques

While reviewing the changes in technique in India, we must take a quick review on the global level, as far as the new techniques were concerned. The reason is that the global changes were reflected in a short period, on to the Indian television news gathering, coverage and post production process as a whole. This shows the correlation with the combination of the Functional Approach Theory and Technological Determination Theory of Mass communication. Media Technology of the satellite channels got changed according to the time and viewers choice, mainly depending on the TRPs rating by some companies.

Technology is changing very fast in 2007. But it has got a big progression. The process of news making was very difficult before the ENG Units came into existence.

A. ENG units

Television images were recorded by John Logie Baird himself even before the arrival of the broadcasting Television came into existence. The resolution of this recording was very low, as he had used the vinyl disc to record the images. In the form of the news reel filming, it was very difficult for the TV journalist to shoot on the film, write the commentary, match the sound and picture and process the film simultaneously.
The Electronic News gathering was a blessing in disguises for them. It changed whole production, recording and post production. Now with the help of the electronically recorded visuals, TV reporter could speed up the work, even play back and see the recording, write script quickly on it, return to the studio and start the editing at the earliest. The younger generation of the TV Journalists, who have never worked in News papers, but thoroughly learnt the TV technique, started searching the new methods of the short cuts to the script writing on the location itself, immediately after the coverage, mark the counter numbers from camera, and almost prepare full editing script for the visual editor. This minimized their and the editors job, saved the time and energy and brought more accuracy, just because of the usage of the ENG units.

BBC started using ENG (Electronic News Gathering) units way back in 1978. The first ever units were brought in DD New Delhi in 1982 and they landed in Mumbai in 1983. The following were the advantages of ENG Units

**B. Guide Lines from BBC**

TV companies like BBC and CNN had already started using the ENG technique before 1978. They had utilized the ENG format in day to day news coverage, but more effectively they had used this on the battle fields to cover the wars. Because of the ENG, the viewers of BBC and CNN were benefited and used to have better visual quality and that too at the earlier. Guidelines could be opted from the European and American TV channels to use the technique in practice.

**C. Size of the unit**

The size of the unit was small, so it was easier to move around any where as per the requirement of the coverage. It was easy to carry the unit anywhere as it was lighter in weight.
D. Saving the time

The recording could be done with in no time. In the cellulite film format, the minimum lighting patterns were required; the proper selection of the location and placement of the camera was needed. But in the case of the ENG unit, it was not big problem of the location, lighting and many technical requirements. The ENG unit was so flexible, that one could start shooting the visual at any given moment, and would record the happenings within no time.

E. Clarity of the visuals

The clarity of the visual recorded on ENG unit was good and up to the broadcast quality. There was no technical problem such as grains or clarity of the picture. Even the ENG units had capacity to record in low light and give full clarity. Video tape has a depth and richness in it. It is crisp and bright, along with more visual range.

F. Minimum Post Production

The minimum post production was required. In case of any recorded visuals, the biggest advantage was that the editing was easier, and the sound matching was automatically done by the ENG camera itself, as the audio and visual were recorded on electronic matching of formats. This had reduced the headache of the cameraman as well as the TV Reporter. The technology allows for quick construction of any story with addition of the audio visual effects to enrich the story.

G. Less Effort for processing

No effort was needed like processing of the film. Earlier in the celluloid format, it was necessary to follow all the procedure of processing of negative and then the positive and in between matching the sound and visual. But in the new ENG technique, it was easier to do all these things in a short time.
H. ENG in DD Mumbai

When the first ENG unit was brought by the then producers of Doordarshan Mumbai, were trained for the operations of this system. There were short courses conducted by the senior producers for the rest of the staff for recording and editing on ENG Units, in DD Mumbai Centre.

I. Enhancing the Quality

Because of the usage of ENG, DD could serve the latest visuals and news items to the viewers and enhance the quality and quantity of the news cast. The arrival of ENG to Mumbai Doordarshan changed totally the modus operandi as well as the production process of the News and even programs. ENG was also utilized for some productions of the programs even for the exclusive out door shootings to enhance the quality and to give the visual variety. The editing used to be done on the low band cassettes which were quite easier in comparison with the film editing, and time saving also.

J. Changes in format

As soon as the ENG units arrived in Mumbai, the formats of the audio visual recording also gradually changed. The medium of recording was also changed from film to the small cassettes. The visuals used to be recorded in electronic format on the cassettes like audio one, and it was most convenient for the editor to work on it. Even there were very fast changes after every 4 to 6 years. Like the low band coverage was started in 1978, but High band Coverage of ENG was introduced in 1982, when the National Programs were started from August 15, 1982. The High band coverage was used till 1988, and then in New Delhi and in Mumbai, slick and more qualitative Beta cam cassettes were introduced by the SONY Company.
The Beta cam coverage was beautiful, clear and best for the Broadcast. The quality produced on Beta cam cassettes was never seen before. This format was used in all the centers of DD for a long time. Even in the era of the non linear and tape lea technology, in 2006, more than 50 percent centers (in More than 40 Kendras) are still using the same format. The smaller format of DV, DVC and DVC Pro was introduced in 2002 by other private satellite channels. Still DD Centers were not ready to go on to the DV format. But when it was proved that the quality of these new cassettes was equally good up to the broadcast quality and was economical too, DD had to approve the usage done by the stringer cameramen for the news purposes at least. By that time the other channels had started this DV format for news recordings as well as the program making as well.

K. Camcorders

The all in one units for the Electronic news gathering, Camera and recorders together, camcorders, were invented first in 1977 by RCA. But practically Sony brought first professional beta camcorder in 1982. This made it easy for the TV journalist to gather the news coverage on the electronic device easily, and it saved their time also. The major advantage was that the recorded visuals could be easily transferred and recorded again on to the different format without a different recorder. Camcorders were welcomed by the TV community, but in some parts of the world, it was taken as a threat, for the human employment possibilities. They thought that this would minimize the employment potential, since only one electronic device would do the job of at least three human technicians.
L. Editing on Location

The Television Journalism was growing from all sides with tapping all the possibilities, all over the world. One of the major problems after the main coverage done on some location thousand miles away from the news centre was to edit and do the post production process and add the graphics etc. There were very few labs available at all the locations. Comparatively the ENG units needed to have very few equipment for the post production in lesser space in comparison with the Film processing Labs, and it was even less expensive. Gradually the practice of taking the whole set of one recorder, one player of the ENG units to the location was started. This made it easier to edit the sequences on the field itself, and even saved the big effort to send all unedited footage to the news centre.

The latest change in the edit set up is Work station by SONY. This editing set up based on the digital technology was launched in 2005. It costs Rs. 18 lakh and size of this small bag is like a Lap Top.

In this small set up, 4 camera input and 2 outputs at the same time is possible. Small wonder this can create a miracle by editing even a cricket match or any stage performance on Line. The Off Line editing can also be done with the latest digital effects, graphics and animation, and even this machine can be easily connected to the satellite for the quick feeding facility. The machine simultaneously work as a portable studio, almost does all the work of a TV station. Now-a-days, in all small OB vans, these small wonders are being installed, which can perform multipurpose functions at the same time with the digital perfection on broadcast quality audio visuals and ENG also.
3.1 Outdoor Broadcast Van

3.2 High Definition camera for Outdoor purpose

3.3 High Definition camera setup for indoor purpose
3.4 Non Linear Editing Setup

3.5 Non Linear Editing Setup

3.6 Modern Studio lighting equipment
3.7 Production Control Room

3.8 Picture of Standard TV and Picture of HDTV

**Analog TV**
- 525 x 400 (Interlaced)
- =210,000 Pixels

**HDTV**
- 1920 x 1080 (Interlaced)
- =2,073,600 Pixels
“Earlier, when we would go for coverage, say in India or the war in Iraq, we would have to travel with 30 suitcases of equipment. Now, thanks to CNN working with Sony, with Panasonic, and other organizations, we have cameras that fit in a suitcase, which you can take as your carry-on luggage. When we went to North Korea, we could move in easily and cover news in a much easier manner, which is often cheaper”.

Rena Golden, Ex. V P and G M, CNN

M. Outdoor Broadcast (OB)Vans

The first portable satellite land stations were developed in 1985, which were carried by the TV Journalists by commercial airlines to the working fields. The units were called ‘Flyaway units’, which were used live report from any part of the world, where satellite could be easily connected. In the earlier stage, the generator back up was extremely expensive required along with the telephone line to get connected to the earth station. The Satellite phone used to connect the reporter to the INMARSAT system of maritime communications satellite.

In 1986, the IBA, ITN and Michael Electronics had developed a Satellite New Gathering Unit (SNG), which was known as ‘News-hawk’. A small dish Antenna was used for up linking for the first time. Because of this experiment, which became the routine for all the news channels later, the recorded tape was not required to be practically carried from one place to another away for thousand miles. With this SNG unit, which was also called later as DSNG (Digital Satellite News Gathering), the visual was up linked and was received within some seconds to the destination of the earth station. Gradually this communication turned from one way to two ways, and was effectively used for the live reporting by the reporters and some dedicated telephone lines were also booked by the channels. This altogether changed
the style and operating of the reports. Some American channels also started using this technology to get information, forward it to the reporter, to communicate and even advising the reporter on the location or field.

Macluhan had said in his Technology Determination Theory that as the medium changes so does society's way of communicating. People can only use the medium for which it was created. When new systems of technology are developed, the culture or society is immediately changed to reflect the senses needed to use the new technology.

The researcher, while working on Doordarshan, Zee Net work, and mainly in NDTV, saw all these changes that took place in Indian Television networks. Doordarshan developed its first flyaway unit in 1998 in New Delhi and in 1999 in Mumbai. The size of this van was too big to be fitted in a Bus. NDTV developed it, in a very innovative modified jeep in 2002, which was specially made according to the needs of the Out door broadcast, and post production. The special feature of the NDTV OB van was that it could be connected to the satellite within 90 to 120 seconds, and was capable of tracking the frequency on its own, automatically, without any manual help. All other channels like Aaj Tak, Sahara, Star News and ETV also bought the same.

3.2.1 An era of convergence

In 1984, nobody would have predicted in his wildest of dreams that Indian Television would go on to the digital format in next 20 years.

But this was possible because of the visionary decisions like starting the STD booths all over India. This started the new wave of communication all over the country and also opened the doors of the global economy. Convergence itself meant that the various activities of the communication through very small and a
few modified multimedia devices, at the same time and from the same electronic instrument at the place. In India, computers used to play a very limited role in the beginning, but later the internet and broadband connectivity made it easier to use the computers for many more purposes like:

- Working on documents, storing and modifying as and when required
- Listening to the stored music
- The storage of the music was possible on the condensed format like M3 or M5
- Storing the images and editing and using them as and when required
- Observing the television channels on the computer
- Recording the various visuals of channels when required
- Making and receiving the phone calls through computers
- Making graphics and editing it on multi-dimensional basis
- Drawing the Pictures and even painting with different styles
- Making multimedia presentations on computers.
- Watching television on your mobile phone, along with receiving and making phone calls.
- Putting a small TV set on your wrist just like the watch.

All this has made the practical media revolution. Even the most difficult process of the visual editing is now possible on a laptop. The professional photographers shoot the snaps, and edit it on the spot and send it to their newspaper offices through satellite or ISDN lines or through the Digital satellite news Gathering (DSNG) devices.

The following are some of the major changes in technical and electronic devices utilized for the Post production of TV news.
A. Digitalization and Computerization

Digitization has made the production process easier in almost all the aspects. Earlier the process of recording was difficult, but then it was converted from low band to high band, and then on to the beta-cam. Then now it has been converted to the High definition TV and even Tape less technology.

No tapes are used for the recording. Mobile phones can also record the moving images up to one or two hours effectively and it can be down loaded on the computer, and can be processed and edited according to the need of the production. Tape-less cameras are available, which can record the moving pictures on the chips like any visiting cards. Then the visuals on cards can be edited in on the Non liner tape less technology. In the changed era of the digitization, the background or foreground of any visual can be changed according to the need. Mixing of the visual and creating various effects is easier than before. The producer can create, modulate, compose, convert and add effects as per the requirement just by using the digital effects and practically create the miracle on the screen.

B. Change in the format of the coverage

The basic format for news gathering in most of the countries like US, UK and Germany, was the film. Gradually it went on to the Electronic news gathering (ENG). In our country, in 1986 the ENG came in to the existence, and things became easier, and the Low band cossets could record the visuals straight on the cossets. Even though the speed was very slow, then the High band cassettes came, which increased the speed, almost double as compared to the low band, and also gave better picture quality. Beta cam gave the professional picture quality up to the broadcast on television itself. HDTV provided the...
unmatched picture quality with the sharpness and details with the beautiful colors.

C. Changes in the editing set ups

Earlier, the most traditional way of editing used to be operated to edit the visuals shot on the format of the low band or the high band. But since the technology has been advanced a lot on all levels of the television production, it has become easier for the producers to edit their visuals in comparatively lesser time and with more accuracy. This was possible due to the non linear editing systems. In this system, no tapes are used, and the images are recorded on the computers in the format of the digital signals. The editing is done digitally on computers itself. The final output is taken in to any format required.

D. Duration and time limits

There is a basic unwritten rule in the electronic media that duration of any normal TV news package should not exceed 2 minutes. In exceptional cases only this limit can be crossed. In all the Hindi and English private satellite channels, this rule is followed strictly. But in DD regional news bulletins, this is not followed. Another restriction is for the production of the news cast. In 24 hour Satellite news channel, it is not affordable to waste time after the recording is brought to the news station. Generally, the post production takes place in 30 minutes, if it is done on priority basis. In DD news, still there are so many hurdles and delays in the production process. It will take time to find out the editors, then editing will be done in a suitable way and in its own style, which will take time. No graphic artist will be available. Even the sound and ambiance will not be edited. In 24 hour news channels no excuse will be tolerated for any delays, and so many visual editors are deputed to run the show continuously. Every facility is available to make the product highly professional.
3.3 Arrival of 24 Hr news channels and new formats of news

Production

Star News arrived in 1992, with the tie up with Zee network was the first 24 hour news channels in India. Until 1992, there was a clear monopoly of DD. The continuous telecast of news was something amazing and unseen, unheard of by anybody. NDTV was the production company, for Star News. NDTV retained the rights of the visuals and news items as well as the stock archives with them also. This strategy helped them when the contract of NDTV with the star group came to an end in 2002. NDTV started its two news channels, and had no dearth of the visuals and references.

In 1993, the new era of satellite TV News started and reminded us of the important Free Press Theory. In this Theory, the free expression is honored, and through that alone, then the freedom can be maintained. A free press, media and people to react on any happening can be taken as the healthy sign of the society or the atmosphere. On the same lines Zee had also started its own news channels in 1995. Being the first pioneering Television network in India, it had a good experience, and set trained manpower also. From 1992 to 1997 there were only one public broadcaster channel, and two satellite channels dedicated to top the news only. In 1994, TV today group started one small news program of 30 minutes a day, on DD national channels. This was not a news bulletin, but the news based current affair program names Aaj Tak. After three years, the program was converted in to a 24 hour running news channels in Hindi, which was the third player in the country.

Style books of the private channels like NDTV

Official Broadcaster of India, Akashwani had developed its style book under the guidance of Bimla Bhalla, D. C. Bhaumik, and D N
Mohanty, and it was corrected twice in the history of the last 80 years. The Production process of TV News was developed gradually but most of the channels still could not prepare their own way of working in own frame work. The style books could not be created nor could the ethical codes be derived. This was because the news channels were so busy that their day to day news production and other work could hardly pay any attention to these issues.

The credit to set the trend of 24 hour news channels goes to NDTV, as they have practically created the culture of good production and news making. Dr. Pranoy Roy created and groomed his TV anchors, over the years, and made them multi tasked and skilled TV journalists in a true sense.

The arrival of the private satellite news channels had lot of impact from the western world as well as European News making. NDTV was the classic example of the professional blend of these two.

Dr. Roy always emphasized the following points:

1. Update in information from every news cast and taking the viewer forward.
2. Constant changing the content based on the news.
3. No sensationalism or yellow journalism.
4. Maintaining the high standards of production, camera work and post production.
5. Grooming the TV personalities, and training them on highly professional multi skilled standards.
6. Outstanding video library and reference section.
7. Constantly updating, learning and teaching and training the graphics and animations in the news casts.

(Source: First hand Experience of the Researcher as Spl Correspondent, NDTV)
One of the major contribution of NDTV as a producer of the first 24 hour news channels in India (for Star News) was, to create news based current affair shows. Dr. Roy brought earlier the trend of analysis of political and especially election news, on DD. He started the various news based programs on star News and later on his own NDTV, which added the flavor of information, analysis and interpretation, for the viewers of TV news channel.

Democratization Theory of Mass Communication expected the people to speak themselves, and not the professional TV journalist should speak on behalf of the people. The programs like “one on one”, “we the people” “Mumbai live” are the examples of interesting current affairs programs. NDTV started the trend of the live telecasts, and practically created the first OB van in India, when nobody had even seen it except DD. NDTV was the first channels to hire the chopper service for reaching the right spot on time.

NDTV and Aaj Tak and Zee Net work started the discussion oriented programs in a very innovative way. Earlier these programs were started by DD itself in seventies, but professionally were not well made. On the contrary, the DD programs of the debated and hard talks were constantly under pressure from the ruling parties and even from the government.

Earlier news based programs of Aaj Tak in 1995 could not be called the news casts as they were mostly prerecorded. They were news based current affairs programs. Then gradually it was a deferred telecast, and then was converted into the live news based program. In the era of the up linking from the out side of the country, every channel adopted various ways to save time. Zee network correspondents were sending story and visual cassettes by every evening by air from all parts of the country to
Delhi news centre. Then the post production was done in Delhi and the visual up linked to the centre in Singapore or Hong Kong, for beaming.

The whole process of the News making for the satellite channels was changed by the verdict of the open sky policy announced by Justice P B Sawant in 1997. There after all the channels started up linking from the Indian soil, which saved their time, energy, money and in addition to that, the viewers were benefited by having the latest happenings, and live discussions in the news casts.

News channels started using different format of DV or DVC for the news coverage. It was easy to handle, economical and served the purpose of the broadcast quality resolution also. The digital format was easier to render and edit.

3.3.1 Difference between Entertainment and News Channels

There is a basic difference in producing just four news bulletins for the regional channels and to run 24 hours news channel. In any other program channels, the news casts were slotted after specific time intervals of every three or four hours. The production team as well as the reporters got some time in between to find out or produce and edit news stories. But in 24 hour news channels there was no time in between the news casts. In such cases, some live or recorded programs were shown such as news based or current affairs programs or crime shows or public debates which were pre recorded. The whole process, organizational structure and time table for both the channels is completely different. Program channels, produce 10 hours soft ware of programs, which is commissioned to the private producers, and is ready in advance. In addition to that, four to six news bulletins are produced live on air. But in the case of the 24 hour News Channels, minimum 24 news bulletins of 30
minutes each (12 Hours) are produced every day and 6 to 8 news related shows or talk shows, debates are presented live or prerecorded.

The working of the 24 hour news room is very different as compared to the other channels. It is divided in shifts. The news casts are not supposed to be repeated as it is in every news cast, but the editor has to take the viewer forward along with its stories and information, which should add to their knowledge. In the program channels, the news casts are the fillers, in 24 hour news channels, the programs or the discussions or the debates are the fillers, and the relief.

### 3.3.2 Reporting : Indoor and Outdoor : new trends

In the 24 hour pattern of the news channels, the Out door Broadcast Vans are blessings to the TV Journalists, as they help the channels to give the latest update live on air. The reporter can take the viewer practically to the spot, on any occasion, accident or incident. It not only adds to their knowledge, but also shows the visual situation practically, faster than any other media, with the help of the satellite. The reporter can report on the spot, with the update, first hand witnesses and his own analysis on the issue. This adds credibility to the news cast. In 24 hours channels there are new trends to contact and communicate in three or four windows. The news anchor talks to the reporters, authorities or the invited guests on different locations and even in different cities. Great impact can be achieved through live communication. This is not just like video conferencing, but is an interactive television reporting in a true sense. At the same time the relevant visuals are shown.
Bulletins from the spot

There is another trend started in the TV journalism that the whole news cast is present from the relevant spot itself. It depends on the most important event or happenings of the day. The OB van is taken to that important spot, and production team is shifted from the news studio to that spot and the anchors practically present the bulletin from that place. This trend was started by NDTV for the first time in the history of Indian Television news.

The researcher, when he was special correspondent and anchor person of NDTV, had experienced such a crucial situation at the time of the Bomb Blasts in Mumbai in 2003. Managing Editor of NDTV Rajdeep Sardesai decided to present the news bulletin from the spot of the blast, Gateway of India. It was a very difficult task, in heavy rains, to produce and anchor not only one but four major shows of one hour each, on two channels in Hindi and English. There was no auto queue or teleprompter, no production facilities like the news studio, and the live connectivity also. Still all the reporters from other spots of the blasts like the Zaveri Bazaar, were contacted and were taken live on the bulletins.

3.4 Usage of modern techniques in News Production

In the competitive world of news gathering, production, and post production, technology of broadcasting has developed gradually. The practical difficulties while gathering the news has given birth to so many devices. Television news reporting and gathering is completely depending on the technical expertise of the crew, and the ability of the crew members to handle the equipments.
“We learn and feel and think the way we do because of the messages we receive through the current technology that is available. Humans do not have much free will at all. Whatever society as a whole is using to communicate, they too will use to communicate. Therefore they will adapt to the medium they are using so that they can send and receive messages like everyone else.”

Marshall Macluhan

As The researcher has searched for the latest devices useful for the news gathering and post production, in Doordarshan and Private Satellite channels as well.²

3.4.1 TV Cameras

From film cameras to the latest digital and high definition cameras, there are so many changes in the news gathering picture devices. The Electronic News Gathering (ENG) has made revolution in the whole process of the news coverage. The following are the characteristics of highly professional camera Units.

- Miniaturization leading to compact cameras
- Cameras can create Thumbnails of opening shot of video sequences
- Simultaneous recording of full and browse resolution video
- Barriers between professional and consumer grade cameras disappearing
- 4:3 & 16:9 switching
- Cameras can stream
- CCDs, being replaced with CMOS devices
- UMID complied Cameras / Camcorders
- Cameras with inbuilt GPS
• Digital Signal Processing in Camera head 14/12/10bit encoding
• Reduction in Aliasing Component
• Translate Complete Dynamic Range of CCD.
• Better Sound and picture, Precise color matching: with smart card
• It is possible to match ENG Cameras also
• Natural picture, details enhancement
• Special effects, soft focus on a particular position is possible.

3.4.2 Digital Video Tape Recording Formats

There are many formats of the coverage on ENG (Electronic News Gathering), which have different characteristics, and merits as well as demerits. The trend of recording for the news coverage is on smaller cassettes. It gives the space to move easily without any weight and makes the TV reporter mobile in a true sense.

Following are some of the tape formats, used for recording.

• **DIGITAL BETA CAM**: ½” tape, 4:2:2 sampling structure, 10 bit, 2.1:1 Compression

• **Digital-S or D-9**: ½” tape, 4:2:2 sampling structure, 8 bit format, 3.3 DV compression

• **DVC-PRO-50**: ¼” tape, 4:2:2 sampling structure, 8 bit format, 3.3 DV compression

• **I-MAX**: ½” tape, 4:2:2, 8 bit format, 50 MB/sec. I frame only, MPEG-2 4:2:2 P@ML

**Digital Video Tape Recording Formats for news application**

The recording formats are equally important, because the post production has great importance in the process of news presentation. The following are some of the recording formats.
• **DVC-PRO-25**: 1/4” tape, 4:1:1 sampling structure, 8bit format, 5:1 DV compression
• **DV-Cam**: 1/4” tape, 4:2:0, 8bit format, 25 MB/sec.
• **Beta SX**: 1/2” tape, 4:2:2, 8bit format, MPEG-2 4:2:2 @ML, 10:1 Compression

### 3.4.3 Trends that are forcing out VCRs

The concept of video cassette recorders in any format may be in Beta, DV or DVC, is getting out dated. The computerization has provided unlimited capacity of storage, as well as usage as and when required. There are servers also, which provide unlimited services of storage, usage and preserving capacity. The following are some of the trends, which are forcing the Video cassette recorders, due to the new Information and computer technology.

- Cost per GB for other storage medias is falling sharply (consumer products fuel the demand, generate volume, resulting low cost)
- MXF—Media Exchange Format (transporting the Video Files through an IT broadband Network) has brought the universal inter-operability. In fact it has become the “lingua franca” of file formats for video applications.
- Wide spread availability of Fire wire (IEEE1394) & USB high speed plug & play interfaces.
- Plug & Play is a reality now. Mobile data valuates are available.

**Emerging requirement of higher data rates:**

- 76 GB/Hr SDTV
- 560 GB/Hr HDTV
- 1 TB/Hr 2K
- 4.13TB/Hr 4K UHTV
• Wide spread use of integrated systems by using SAN, NAS.
• Ease of mass media management.
• Multi channel transmission and Multi mode delivery of the content has necessitated the requirement for the simultaneous repurposing of the content.

3.4.4 New Age Recording Medias

Because of the computerization and fast changing technology, the recording systems and media have also changed. The tapes are transferred to hard disk of computer, or now the visual itself is being recorded on the small hard disk attached to the cameras. This tape less recording has many advantages and the visual and audio quality is unmatched. The following are some of the recording Medias which have enhanced the news gathering process and made it easier and more qualitative.

• Tapes getting smaller in size but bigger in capacity
• Optical Disc /DVD 23 GB recording capabilities - 90" at 25 Mbps!
• Hard Disc
• Memory Stick
• SD memory card - 4 x1GB cards in one PCMCIA card called P2 card.
• One P2 card stores for 18" at 25 MBPS
• Potential to go to 128 GB in one card

3.4.5 Solid State / Flash Memory

The days of recording on cassette or on the CD have gone, and now the content as well as the audio and visual is saved and carried on the flash memory. The still photos are not taken on the film or paper, but on the digital images. The following are the features of solid state or flash memory.

• Fast write-read solid state memory.
Flash card market is growing rapidly.

Market is driven by **Digital Still Photography** & to an extent by **portable juke box**.

Also known as compact flash I & II, memory stick, secure digital,

SD, multimedia card (MC).

Most important development is the **ability to store more than one Bit per cell**.

2 bit /cell are available, 4 & 8 bit/ cell are on the anvil.

6 GB capacity is available; **12 GB has been announced** at 12 MB/sec transfer rate.

Multimedia card association announced that **50 GB/sec transfer** rate will be achieved soon.

Life time warranty is offered.

Can work at low temperature.

Panasonic has brought camcorders, recorders and players based up on solid state memory called as P2.

P2 card uses 4 nos. of 1 GB SD cards with RAID controller chip.

8 GB, 16 GB, 128 GB cards promised.

Can withstand 1500G shock.

**3.4.6 Hard Disc Drive (HDD)**

First HDD was used 20 platters of 24" to provide 350MB about 40 yrs. back. Today the smallest known HDD is using 1/2 platters of 0.85" which weighs only 10gms providing 2GB, 4GB is coming soon. Today aerial density of 80 GB/ sq. inches has been achieved.

• In 1990 it was 1 GB/ sq. in.
• In 2000 it was 10 GB/ sq. in.
• HDD of 400GB is available on 3.5" platter.
• Cost per GB has fallen to 1 US$ or less. Likely to be cheaper than Magnetic Tape in near future.
• “Super paramagnetic” phenomenon impedes the further growth.
• Seagate has claimed to have achieved 101 GB/sq inch density by using fully integrated magnetic head & anti-ferromagnetic AFC, disc.
• Others like Fujitsu, Hitachi and Toshiba are also catching on.
• Non operating shock 10,000G has been achieved, however operating shock limit is 350 G.
• Fluid Dynamics bearing brought the stability at high rpm.
• New Serial Interface provides ease of installation & higher data rate.
• Serial ATA (SATA)
• Serial SCSI (SAS)
• **Data transfer rate in case of SATA**
  
<table>
<thead>
<tr>
<th>Year</th>
<th>Data Rate</th>
</tr>
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<tbody>
<tr>
<td>2006</td>
<td>1.5 GB/Sec.</td>
</tr>
<tr>
<td>2008</td>
<td>3 GB/Sec.</td>
</tr>
<tr>
<td>2010</td>
<td>6 GB/Sec.</td>
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• HAMR-Heat Assisted Magnetic recording developed by Seagate is indicating an aerial density of 50Tb/sq. inches which will give 200 TB on 3.5” HDD with two platters and 500 TB with five platters
• 1 Tb/sq. inches devices are likely to be available by 2010.

**Optical Disc**

• OPTICAL DISC is a Consumer product more volumes will result in reduction of cost. Nowadays, only marginal difference exists between consumer and professional grade disc. The same base material (substrate) is used for both consumer and professional products. Professional grade DVD is optically
examined to weed out discs with high number of defective spots. China has become the world’s largest manufacturer of DVD.

- Much faster penetration of DVD, as a result of reduction in cost of DVD players - CHINA EFFECT
- Consumer grade: 9.4 GB in two layers is available. 18 GB is likely to be made available soon.
- The Next generation of Consumer/ professional grade DVD (HD DVD) is based on blue/violet laser.
- Where by using blue laser of 405nm wave length and 0.85 numerical apertures NA, lens, higher aerial density has been achieved.
- 0.6mm substrate is protected by a thin layer of 100 nm uniform transparent coating & two such substrates are sandwiched together to form a disc of 120 mm diameter.
- Blue laser disc of 23.3 GB (professional grade) & 25 GB consumer grade are available.
- TDK and Panasonic are bringing 50 GB two layer one sided DVD
- Already complete range of Professional Production & Post Production equipment (XDCAM) is available from Sony.
- Toshiba & NEC supports another Blue Laser format which is the extension of current DVD technology.

**INEC / TOSHIBA DVD**
- 20 GB/side
- Dual layer 40 GB/side
- 36 mbps data rate
- Blue laser 405 nm, 0.65 NA
3.5 **Non Linear Editing**

This latest state of art technology based on the digital technique not only saves time but also maintain quality even after so many transfers of the audio visual content. Earlier the loss of the visual quality used to be minimum five percent per transfer. But in NLE, it makes practically no difference in the edited version. Instead of that, the visuals can be edited to the minute details of sound, pictures and the digital effects. The correction of the color, sound and their matching is easily possible with no delays. One more advantage in NLE was that it saved the time in comparison with the cut to cut cassette recording, where one had to go to the beginning, if any sudden change was required to be done. Here in NLE, one can easily go to any point and edit sound or visual, without disturbing the pre edited sequence. The memory of the computer helped in saving the images and delivering the edited format with in no time.

3.5.1 **Random access to video clips**

In the earlier days of film editing, the basic process of making the negatives, inter positives & positives, editing the visuals, matching the sound tracks and all the process used to be very time consuming. Even after the Electronic News Gathering (ENG) was introduced on Low band and later on high Band, each
and every shot had to be searched and found out, and then edited. Because of the Non Linier Editing Set Up, it became much easier and faster to search the particular shot, for the News visual editing as well as matching purpose. The editor could directly access the shots already recorded. Once he was accessible directly to the recorded shots, the time wasted for the searching was saved.

3.5.2 Improved workflow

Because of the speedy editing on the different tracks at the same time, the work load was divided, and the work flow was improved. Simultaneously, different jobs could be completed, and handled because of the facilities of the multi task windows system.

Innumerable effects

In the cut to cut editing system, for changing even one shot, the editor had to go to the beginning, and again edit according to the need and requirement of the changed circumstances. Then again the sound and picture required the matching. But in the changed non linier editing system, there are so many effects which can be done on the spot to hide the defects, or even to decorate the visual or sound aspect of the clips. The basic effects like cuts, wipes, flash, super impose, dissolve etc are easily possible without going back or making any acrobats of overlapping, trial and error or making any risky experiments. Even the effects can be changed within no time, even the package is on AIR live or knocking on the door of the live transmission or the recorded one.

3.5.3 In built Computer Graphics

Until 1999, the computer graphics were a big headache for the visual and content editors. The Graphics are essential to explain, elaborate and interpret the situation of any happening or
event covered in the news cast. Even in the recorded audio visual package, in built computer graphics play a very important role. It takes a lot of time to create 2 dimensional or 3 dimensional graphics and render it on to the cassette. Some times it used to takes hours to render few seconds duration graphics. But now it has become much easier for the news and visual editors to create, render and record as well as edit the graphics in the required format and time duration without any hassle and delay, with ultimate perfection, just because of the non linear Editing Set ups.

**Color correction**

Various coverage by the different camera crews, on different locations with different models of the cameras, give various results, different skin tones and colors. When it comes to the editing table, it needs to be matched, or otherwise, the viewer would feel the unusual jerks and jumps in vision. This could be avoided if the editing is done on NLE (Non Linear Editing) Set Up. All the colors, brightness, contrasts can be matched on the NLE, even some effects can be used, different tracks could be utilized for various required audio frequencies. The corrections are possible and can be made as many times as per the satisfaction of the editor or the news director.

**Source Quality is maintained**

Basic risk in the editing of any visual is the loss of the visual quality. If the Visuals are transferred for many times while the editing is on, every time there is a risk of loss of at least 10 %. But in the NLE set up, this risk is minimized up to 2 %, because the editing is done on digital format, where there is a very little risk of generation loss is involved, and the basic quality of the visual is maintained as it is. The original work is maintained, so that it can be used again and again with the original quality.
**Audio Improvement**

The recording done on the location is most of the time full of the ambiance and having notice of the unwanted factors like birds, traffic, crowd etc, after starting editing and making sound effects on the recorded tack, as a big challenge for the recordist and the editor. In the news coverage, the most important part is that the sound bites or the statements recorded on the spot or the interviews recorded. If the surrounding natural ambiance or other noise has overcome it, then the audio effects are required to be done.

**3.5.4 Edit in the field with Laptop**

Another biggest advantage of the NLE is, that the editor or the TV journalist can record the visual or the event on the location spot, edit on the Lap Top on the same location or in the car, without wasting time, and with adding the graphics or the effects in to that, with the use of the satellite or the ISDN telephone lines, edited visual can be send via satellite to the head office within no time. At present the TV Journalists are assigned and trained to perform all the jobs simultaneously, but the NLE has become the major helping hand for them to complete the task in the minimum possible time.

**Real Time Editing**

Editing process, day by day has improved a lot, on the technical ground and with the help of digital conversion. Earlier, for every effect a few hours were spent. But with the help of NLE, without wasting time on rendering the effect to the computer, the NLE gives the real time visual editing facility for the effects. This saves a lot of amount invested for the booking of the equipment and the studios for the editing specifically 2D and 3 D effects needs longer time but the conventional way of editing. But in the
changed process of the NLE, it requires some seconds to create and render and present the effect.

**Real Time Multiple layering**

Another aspect of his bigger advantage to the visual editing in multiple layering is to save time and create the effects in the virtual reality. This is made to give some impression to the viewers, which is not real. Mostly these effects are used in fiction or in the advertising and commercials. But some times, in News coverage also, if some part of the visual is required to be hidden or covered by the mask or some effect, then the multi layered effects are required. The NLE saves time in doing this by offering the real time effects.

**3.5.5 Precision Keying – Possibilities of virtual realities**

When the visual is recorded on cameras on very different locations and mostly under most difficult situations, there is a very little choice left to the cameraman as well as to the reporter, than to record it as it is. But after reaching to the studios, when the content is being prepared, in the mean while, the visual editor always makes the visual clean and adds some effects in to that to make more visible.

**All in one PC based system**

PC based systems consisting of CG, Switcher, Audio Mixer, 2D – 3 D DVE Technology have offered a lot of facilities to the television world, and the conversion has made it possible in very limited resources and in little time. Now a days , in one laptop, or in one computer, from recording up to editing, adding digital effects and multi-layering, adding animation and composing, changing the speed of the movement, all this can be made effectively in a short span of time, as per the requirement. There are some mixers come switchers available in the market, which gives all the facilities in one work station.
Video Server

Video servers have created the revolution in the audio visual television industry. In India the usage of the video servers started in early 90’s, but in US and UK it started only in mid seventies. Servers have the capacity to store, use and process the data as well as content, audio, and visual forms and even in the multimedia formats. It provides the random access and saves the time of the user and the content is shared with many or multi-user. One of the major facilities is the simultaneous multifunction like recording, Play back, browsing and editing and processing the various files and suits.

3.5.6 Major facilities and services provided by the servers

Multiple random accesses provide simultaneously Random access from multiple ports. It has an ability to edit footage on number of suites. It is Shared Editing and has changed totally the Work culture.

- Eliminates Tape – Copying/Burnt out clippings not required.
- Browsing option with time code.
- Simultaneous Recording & Playback.
- Reduces loading and recording time of edited result.
- Suitable for Automation including News Automation.
- Industry is heading towards e-production.
- Hardware component is decreasing while the software is increasing.
- Equipment is likely to become more IT oriented and users friendly.

The technology is advanced, the technique to capture the various moments happening tin the world around has been improved beyond the imagination. In fact the different situations are the same like they were in the history. Like natural calamities,
battles and politics, or any walk of life the way to cover these for the television has become innovative. Every Journalist is trying to capture it at the earliest, in better manner and use the best available technology to impress, seduce and convince the viewers. Nothing is new in Television, except usage of modern techniques every day, to sale the audio visual product in a rat race. No Technology has been emerged to understand human mentality and improve human judgment of the situation. The Television journalism has became market driven and competitive, and in satellite communication the margin of errors is still similar.

It is felt now that the use of the new technology should be done effectively and the Journalist community should not get seduced by this to win the race to become the first one to break the news. Even the viewer could loose the interest due to the excessive utilization of the technology.

3.6 DD Mumbai News Room and Latest technology

From 1972 up to 2006, DD Mumbai news Marathi at Mumbai had undergone a lot of changes. Until 1998, this RNU (regional News Unit-Marathi) was in a very ordinary shape. The Unit used to be operated from two small rooms 250 sq. feet in total. Half of it was given to the joint director of News Office and the rest was the news room. When the new building took place in 1999 then the huge space was allotted to the RNU, where a separate and permanent studio was allotted to News. All the latest cameras were brought, and News department have been given Four Edit suits, Graphics machine and effects, teleprompter, and even the best capacity server.
Still there are some loop holes in the production and presentation of the Marathi news casts from RNU Mumbai.

- In any news bulletin, no usage of the graphics, animation has been made. The designing of the graphics is a highly specialized job. Some graphic artists are trained for this, but no Producer insists for the animation or graphics in every bulletin.

- The same style of lettering and statistics is being used for the years in the news cast. No three dimensional effects have been added to the bulletin, even though all the latest software is provided to the Production unit of the RNU.

- No imagination and visualizing were applied by the news Producers to the news stories. Basically these producers were recruited and trained for the program making. This made the huge difference in the production of the Private satellite news bulletins on the other satellite channels, and the DD News casts. Because of the careless attitude of the Producers, and the compulsion and pressure put on them by the Directors to work in the RNU, without the required professional or Journalistic knowledge, the news cast looked boring and did have any quality visual in it.

- In comparison with all the Private satellite channels, the DD regional News cast was exposed badly because of its poor visual presentation, Shoddy editing, not using of the effects, not using the server and OB van on regular basis, even though it was hired for RNU from outside. Despite of having maximum infrastructure.

- Some changes have been made over the years in post production. Auto scroll control has been provided in the hand of the News caster. There is a clip system attached to the
telephone lines, through which the stringers could send the visuals from various parts of the state, to the news room.

- In all the Satellite news channels, these systems are out dated now. The speed of the news cast is maintained by either the news editor or the news production assistant from the control panel. The reason is that it is easier to manage or edit the news items, from the panels itself, the speed control is also ideally supposed to be controlled according to the need of the news editor and producer, and not according to the presenter. DD is still under the impression that the news caster as the reader, and not as a presenter.

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