



العِلْيَا لِلْتَّصَالِ الْسَّمْعِيِّ الْبَصِّريِّ
الْهَادِئَةُ لِلْمَدْرَسَةِ الْعُلُومِيَّةِ | مَدْرَسَةُ الْعُلُومِيَّةِ
Haute Autorité de la Communication Audiovisuelle

Published on *Haute Autorité de la Communication Audiovisuelle* (<https://www.haca.ma>)

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HMS



**PROGRAMS MONITORING SYSTEM
HMS**



The Software Package HMS

- **HMS Acquisition :**

Receive, digitize, store and archive TV and Radio programs : national, regional and local channels
(used since 2009)

- **HMS Media Library :**

Media library à watch/listen to TV and Radio programs, live or previously broadcasted: recorded
(used since 2009)

- **HMS Pluralism :**

Control of political Pluralism during normal or election period (used since 2007)

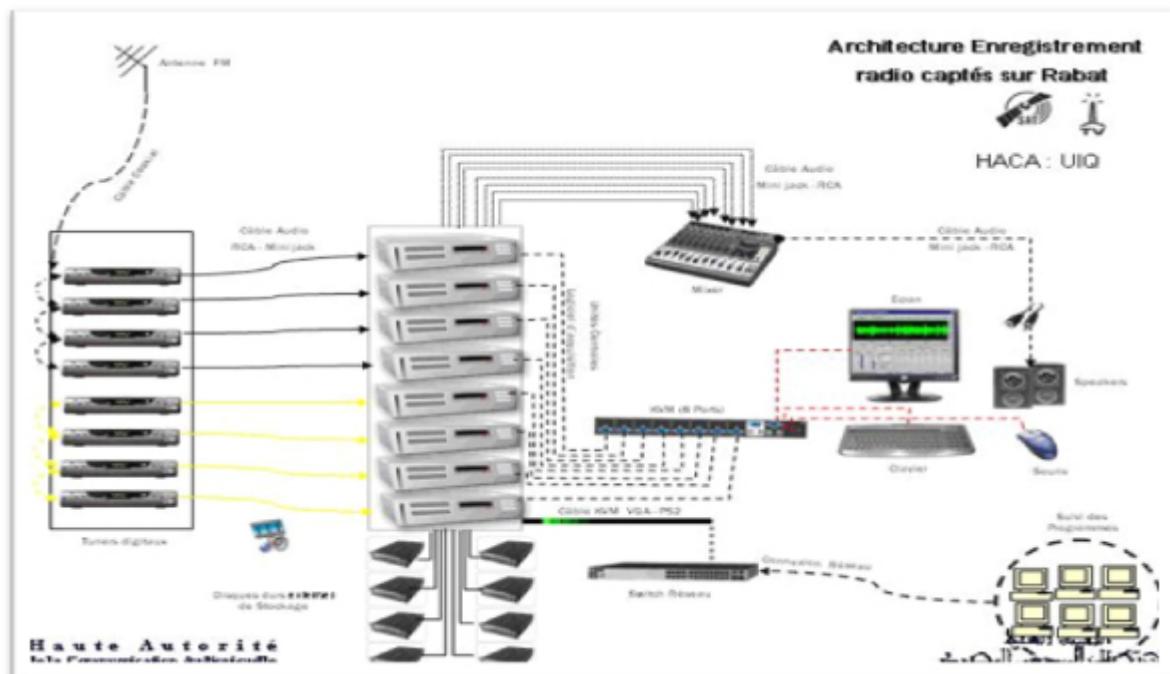
HMS Acquisition



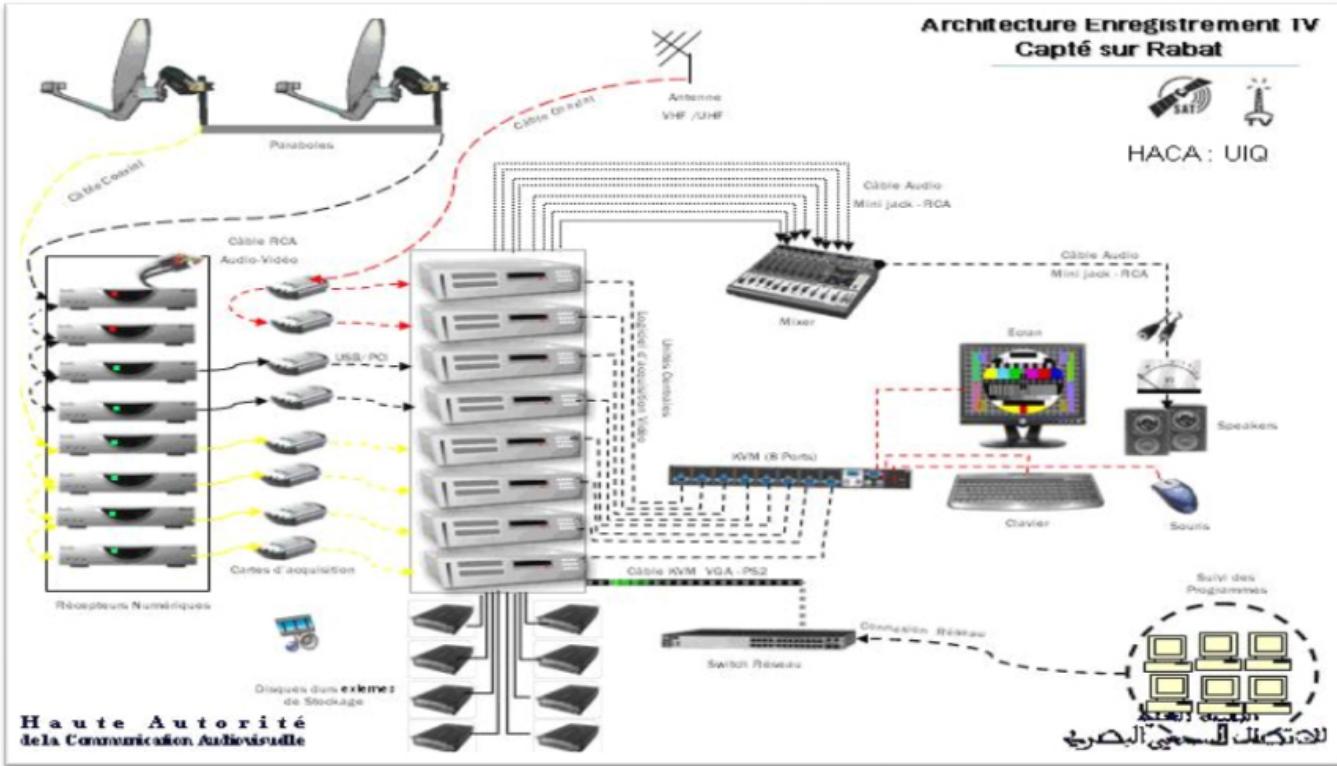
This software allows TV and Radio signals reception **24/24** and **7/7**, recording, storage and archive for analog and digital video and audio broadcast, or via satellite.

The main strength of this software is the recording, in central and remote platform, of programs broadcasted by distant Radio channels which signal is not received in the Headquarters.

System Diagram: Reception and Recording of Radio channels in HACA



System Diagram: Reception and Recording of TV channels in HACA



System requirements

- **Signal reception and distribution Platform:**



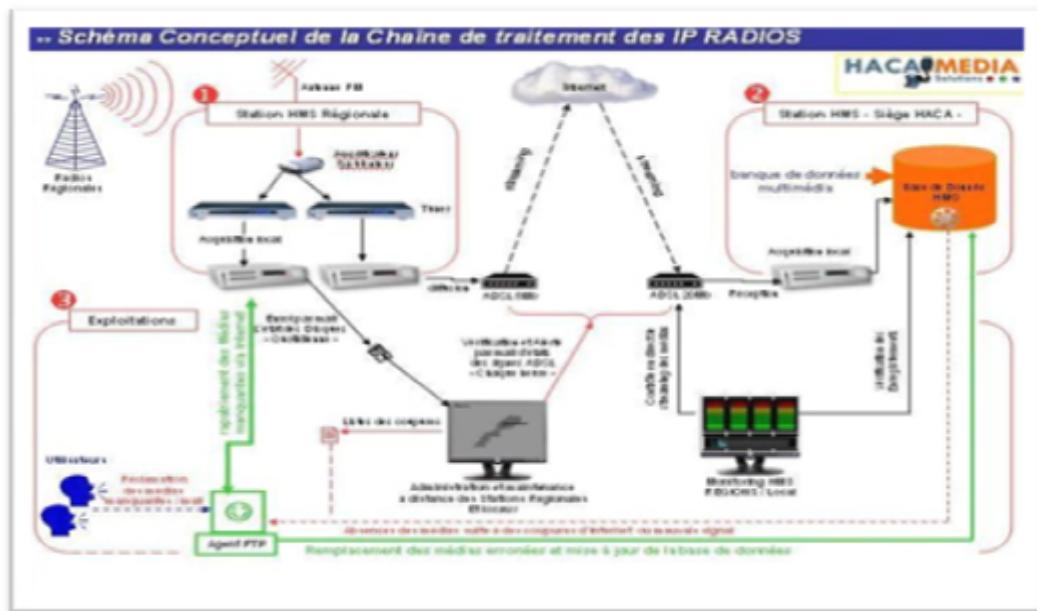
- FM, UHF, VHF and parabolic antennas.
- Signal ,and audio and video amplifiers/distributers.
- FM tuners, digital receivers (for satellite and digital terrestrial signals).

- **Media storage and archiving Platform :**

- Workstations equipped with « HMS Acquisition »: 2 Workstations for each TV or Radio Channel to record
- audio/video converters

- **A Network infrastructure allowing the interconnection of the different workstations.**

System Diagram: Reception and Recording of Distant Radio channels



Regional installations throughout MOROCCO



Regional HMS Stations

Casablanca



Fes



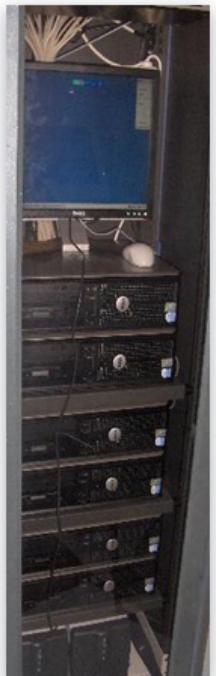
Tangier



Marrakech



Agadir



Tetouan



Meknes



Oujda



Laayoun



Dakhla



System requirements (Regions)

- **Signal reception:**

Installation of an FM antenna.

Signal amplifier and distributor.

2 FM tuners per Radio channel.

- **Programs recording and storage:**

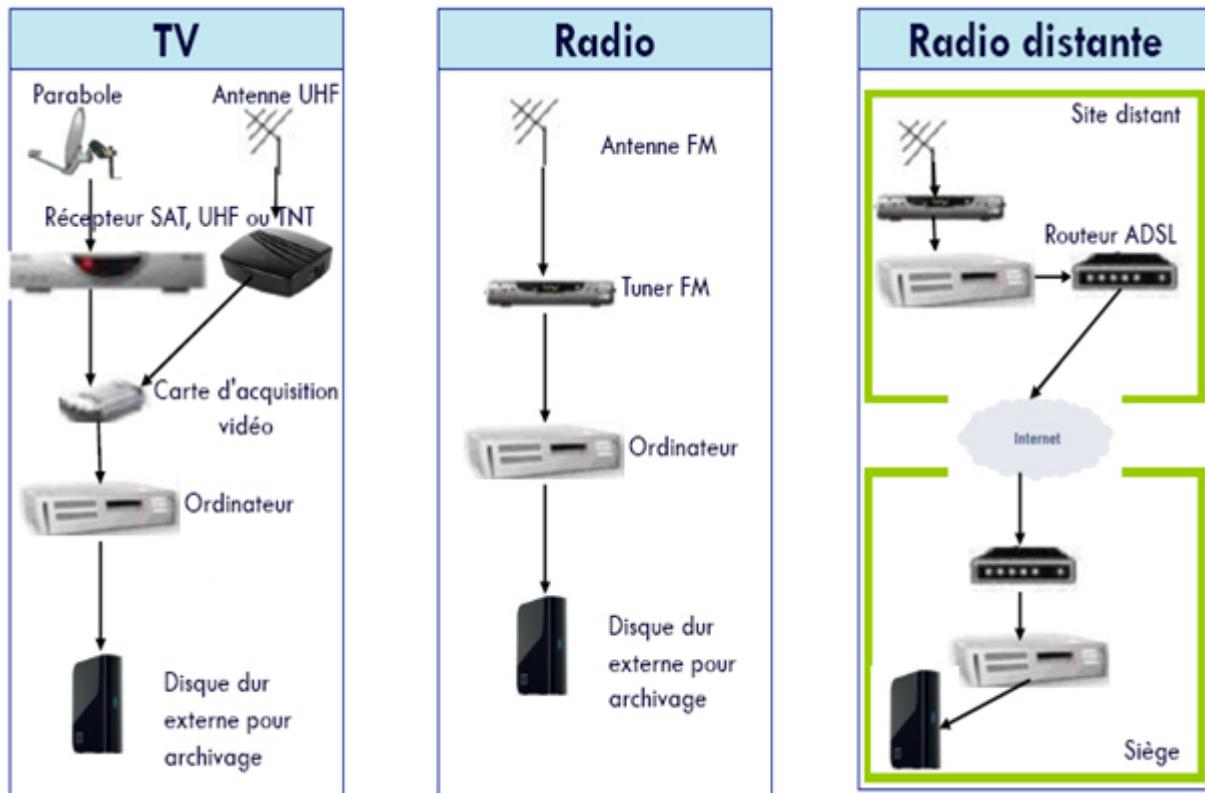
Workstations equipped with « HMS Acquisition »: 2 workstations for each Radio Channel to record

- **Signal streaming and Media file transfer**

An 8 MB/s (min) Internet (ADSL) connection with a fixed IP address in the regional site, and another 20 MB/s (min) Internet (ADSL) connection with a fixed IP address in HACA headquarters.

Information

- HMS Regions: since summer 2007
- 2 TB External Hard Drives are used. Each single disk stores:
 - 1 year storage for 1 TV channel, or
 - 1 year storage for 8 Radio channels
- Total Backup: Every recorded and stored signal, either in Rabat (HACA site) or in regions, is done concurrently by Two separate equipments à Machines backup, Disks Backup



HMS Media Library



The system gives access, via HMS-Acquisition, to audio-visual programs, live or pre-recorded: an easy access available to all the staff in HACA

| |
|----------------------------------|
| TV |
| TV 2M |
| TV 2M Sat |
| TV Afam |
| TV Al Aoula |
| TV Al Aoula Sat |
| TV Al Maghrebia |
| TV Arrabias |
| TV Arriyadha Sat |
| TV Arriyadha TNT |
| TV Assadiqa |
| TV Laayoune |
| TV Médé 1 |
| TV Médé1 Sat |
| TV Tamazight |
| Radios locales |
| La radio Internationale |
| Radio 2H |
| Radio Amazigh |
| Radio Aswatt |
| Radio Atlantic |
| Radio Casa FM |
| Radio Chada FM |
| Radio Climat |
| Radio Hit |
| Radio Luxe |
| Radio Mars |
| Radio Med |
| Radio Médé 1 |
| Radio Medina FM |
| Radio Mohammed VI du Saint Coran |
| Radio Nationale |
| Radio Sawa |
| Radios Régionales |
| Radio Cap Radio |
| Radio MFM Atlas |

Média

Suspendu

01:07

-60 -30 -15 -.5 -ZAr Play +ZAr +5 +15 +30 +60

Marg. début Préc. 16/11/2016 21:01:07 Suiv. Marg. fin

Informations

Recherche d'un programme

Date & heure : 16/11/2016 21:00:00 Attendre Annotation

Debut Fin

Programme

Catégorie

Dépendant

Domaine

Observations

Partagée avec

- BOUEDDARINI Nabil
- DOUARNA Bouziane
- FILALI NACHIT Houda
- HANCI TAMOULH
- KHAFAJI Abderrahim
- LYAZIGHI Mourad
- MACHOURI Hassan

Enregistrer ... Annuler

Liste des affaires traitées

| Code | Service | Programme | Catégorie | Dossier | Date | H début | H fin | Commentaire |
|------|-------------|-----------|-----------|---------|------------|----------|----------|---------------------|
| 1042 | TV | الهلال | x | x | 01/03/2016 | 21:10:09 | 21:19:14 | res |
| 170 | TV Al Aoula | الهلال | - | - | 07/02/2016 | 22:55:30 | 23:43:30 | |
| 168 | TV Al Aoula | 14/20 | - | - | 07/02/2016 | 15:20:11 | 15:20:52 | 07/02/2016 14:49:31 |

HMS Media Library functionalities

- Watch/listen to live broadcast
- Watch/listen to recorded programs
- Play a program from an external source
- Annotate and comment a program or a program sequence with the possibility to attach a

document or a file

- Download a program or a sequence with the possibility to export for further use
- Exchange between different users. The functionality « Annotation and Monitoring » enables program and sequence processing, annotation, comments, document or file attachment, and exchange with other users.

HMS Pluralism



Operational since 2007

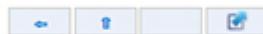
This solution allows statement counting and timing for political, union and professional personalities on TV and Radio channels in normal or election period.

The solution configuration is based on the rules prescribed in decisions relating to political pluralism in normal and election period.

(Patent OMPIC N°29818 03-10-2008)

WIPO: World Intellectual and Property Organization





2. (MA29818) Système de comptabilisation des temps de passage sur un document audiovisuel

[National Biblio. Data](#) [Description](#) [Claims](#) [Documents](#)
Permanent Link/ Bookmark: **Application Number:** 29555 **Application Date:** 26.12.2006**Publication Number:** 29818 **Publication Date:** 03.10.2008**Publication Kind :** A1**IPC:****Applicants:** HAUTE AUTORITE DE LA COMMUNICATION AUDIOVISUELLE-HACA**Inventors:** FAHSI Lotfi

BOUEZMARNI Najib

BOURBATE Adil

Priority Data:

(FR) Système de comptabilisation des temps de passage sur un document audiovisuel

Title: (FR) Procédé intégré de comptabilisation et de génération de rapports multimédias quasi automatique des temps

d'interventions, de passage et d'antenne de personnalités publiques ou de différents thèmes ou genres dans des documents audiovisuels caractérisé en ce qu'il comporte une étape de détection et de marquage automatiques de séquences spécifiques de ces documents, une étape de traitement de ces séquences, une étape de découpage, de concaténation et de stockage automatiques de ces séquences, une étape d'archivage de ces séquences et enfin une étape de génération automatique de rapport statistique multilingue, la combinaison des deux dernières étapes, via le moteur de recherche du dispositif, aboutissant à un rapport multimédia prêt à l'emploi.

Information

- HMS Pluralism operates with a Database of political, union and professional personalities. This database is updated on a regular bases.
- Statement counting is based on how a personality is represented: as a minister, a political party member, professional...

Intervenant

| | |
|--------------------|------------------------------------------|
| Nom : | LEMRINI EL OUAHABI AMINA |
| Qualité : | PRESIDENTE |
| Appartenance: | HAUTE AUTORITE DE LA COMMUNICATION AUDIO |
| Sous Appartenance: | |
| Catégorie : | ORGANISMES NATIONALS |

Fiche autres [Intervenant](#) [Modifier](#) [Nouveau](#)

Informations

| | | | |
|-----------------------------------------|----------------------------------------------------------|-----------------------------------------------------|-----------|
| Rubrique | MEDIAS | Position: | - |
| Sujet | SEMINAIRE INTERNATIONAL SUR LA CONSERVATION DES ARCHIVES | | |
| Remarques | | | |
| Temps | Période | Présentation | |
| <input checked="" type="radio"/> Parole | <input checked="" type="radio"/> Normale | <input checked="" type="radio"/> Expression directe | |
| <input type="radio"/> Antenne | <input type="radio"/> Pré-campagne électorale | <input type="radio"/> Invitation au plateau | |
| <input type="radio"/> | <input type="radio"/> Campagne électorale | <input type="radio"/> Meeting | |
| Région | Choisir une région | Nature | Nationale |
| Localité | 0 | | |
| Langue | ARABE | | |

Timing (In/Out)

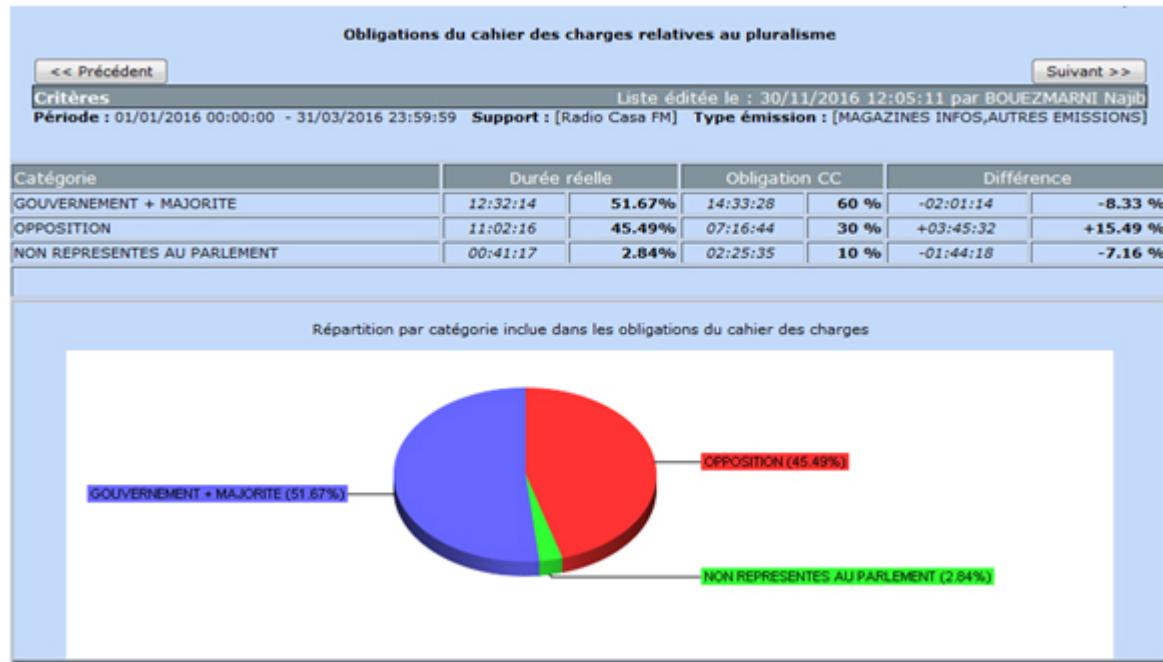
| | | | | | | |
|---------------------------------------------------------------------------------------------------------------------------|--------------------|----------|--------------------|--------------------------|------------|--------------------|
| Début | 31/10/2016 12:58:3 | Fin | 31/10/2016 12:58:5 | Durée | 00:00:16.0 | |
| Projet Ajouter Modifier Supprimer Nouveau | | | | | | |
| Suspendre Supprimer projet Archive Ok Retourner | | | | | | |
| 31/10/2016 12:58:36 | 12:58:52 | 00:00:16 | AYACHE MOHAMED | PRESIDENT COMMUNE RURALE | RNT | MAJ 00:00:37 |
| 31/10/2016 13:12:21 | 13:12:58 | 00:00:37 | AYACHE MOHAMED | LEMRINI EL OUAHABI AMINA | PRESIDENTE | HACA-CSCA 00:00:16 |

The video player displays a woman with glasses speaking into a microphone. The background shows a banner for a seminar on archive conservation. The video player interface includes controls for play/pause, volume, and time markers (00:00:45, 50:45).

(Example of Results)

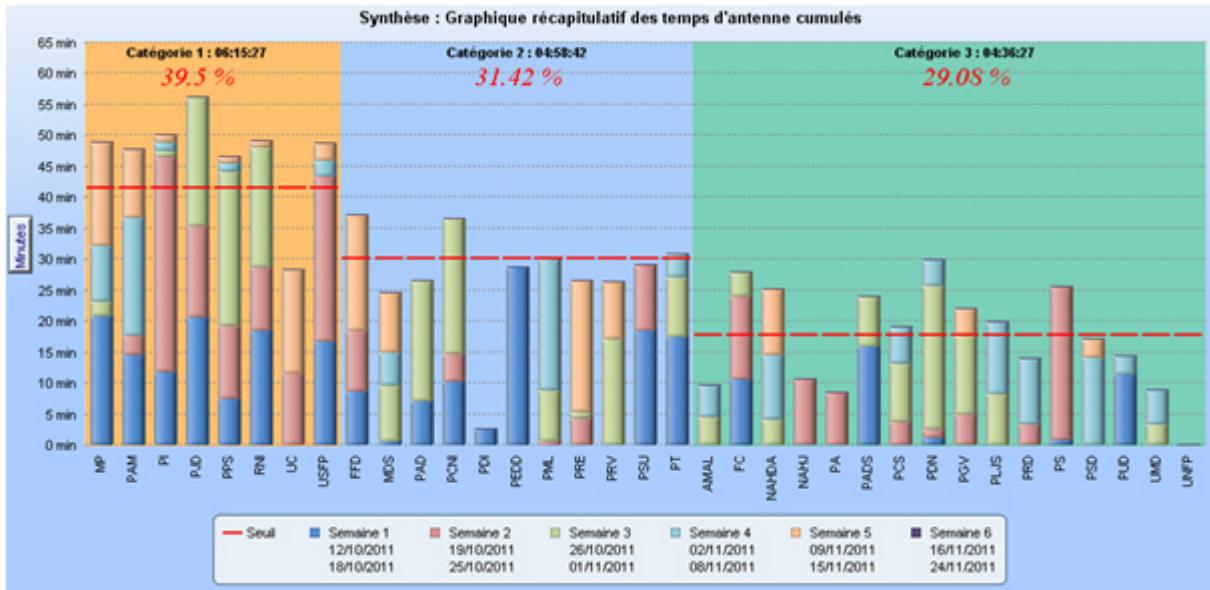
| Normal period | Election period |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <input type="radio"/> (16) Liste des séquences <input type="radio"/> (1) Liste détaillée par date <input type="radio"/> (2) Liste détaillée par intervenant <input type="radio"/> (3) liste classement / rubrique / sujet <input type="radio"/> (4) Liste condensée par partis des équilibres politiques <input type="radio"/> (5) Liste détaillée des équilibres politiques <input type="radio"/> (6) Relevé des temps d'interventions politique par heure <input type="radio"/> (7) Interventions par personnalité triées par la durée totale d'intervention <input type="radio"/> (8) Intervention par classement triées par la durée totale d'intervention <input type="radio"/> (9) Intervention par catégorie triées par la durée totale d'intervention <input type="radio"/> (10) Intervention par institution triées par la durée totale d'intervention <input type="radio"/> (11) Nombre intervention par émissions <input type="radio"/> (12) Tableaux croisés ... <input type="radio"/> (17) Tendance <input type="radio"/> (13) Obligations du cahier des charges relatives au pluralisme <input type="radio"/> (18) Rapport complet <input type="radio"/> (19) Pourcentage cumulés <input type="radio"/> (20) Création d'un DVD/CD | <ul style="list-style-type: none"> ■ Répartition du temps d'antenne par type d'émission, catégorie et support (Version Arabe) ■ Rapport général pour Tout support, selon les critères ci-dessus (Version Arabe) ■ Temps d'antenne trié par institution tout support confondu (Version Arabe) ■ Temps d'antenne trié par intervenant tout support confondu ■ Autres données utiles tout support confondu (Version Arabe) ■ Emissions tout support confondu ■ Evolution du temps d'antenne par semaine tout support confondu ■ Répartition du temps d'antenne global par type émission et catégorie tout support confondu ■ Répartition du temps d'antenne par émission et catégorie tout support confondu (Version Arabe) ■ Partis politiques (Version Arabe) |

(Obligations of decision 46-06)



2011 Elections : Distribution by political parties for Radio Nationale





| Type émission | Nb Emission | Nb Intervenant | Nb intervention | Volume horaire |
|------------------|-------------|----------------|-----------------|-----------------|
| Journaux/Flashes | 27 | 49 | 98 | 0:45:55 |
| Magazines infos | 66 | 99 | 727 | 15:04:41 |
| Total | 93 | 148 | 825 | 15:50:36 |

Final Report Edition



Search Module

Multi-criteria Search module

Screenshot of the Multi-criteria Search module interface:

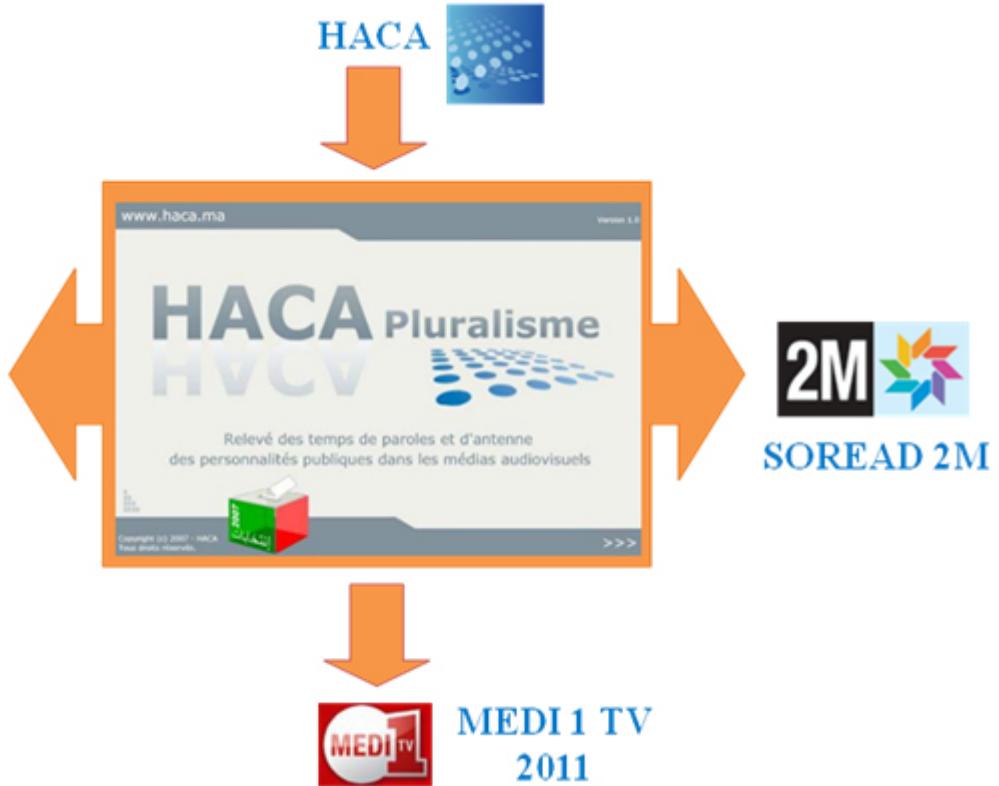
- Top Bar:** Shows a grid of thumbnail images representing different video clips.
- Left Panel (Search Criteria):**
 - Explorer:** Includes fields for Support, Personnalité, Type émission, Emission, Classement, Catégorie (set to GOVERNEMENT), Rubrique, Qualité, and Institution.
 - Period:** Set from 01/01/2010 to 01/04/2010.
 - Subject:** Set to Personnalité.
- Middle Panel (Preview):**
 - Category:** TV Al Oula - JOURNAL DE NUIT - ARABE
 - Thumbnail Preview:** Shows a video frame of a man speaking into a microphone.
 - Text Preview:** HEJIRA AHMED TABOUIQ MINISTRE DE L'INDUSTRIE, DU COMMERCE ET DE LA MISE A NIVEAU DE L'ECONOMIE, GOUVERNEMENT, QUATRE PARTS
 - Statistics:** Period du 01/01/2010 à 19/11/2010. Support: Radio Amazigh 00:07:46, Radio Aswad 01:57:03, Radio Al Oula 01:56:11. Nb Interv.: 10, 92, 245.
- Bottom Panel (Results):**
 - Results Count:** 3738 résultats trouvés.
 - Table:** Displays search results with columns: Date, Durée, Personnalité, Rubrique, and Sujet.
 - Sample Results:**
 - 2010-01-07 18:04:57 : BENKHADRA AMENA, ENERGIE & MINES, "Bénéfices financiers de l'énergie et de l'industrie au Maroc"
 - 2010-01-07 18:07:09 : NACIRI KHALID, COMMUNICATION, "Nouvelles stratégies de communication au Maroc"
 - 2010-01-07 18:39:43 : BENKHADRA AMENA, ENERGIE & MINES, "L'industrie marocaine et les défis futurs"
 - 2010-01-07 18:38:50 : HEJIRA AHMED TABOUIQ, HABITAT, BTP & URBANISME, "L'intérêt de cette loi pour le locataire et le propriétaire"
 - 2010-01-07 18:48:23 : NACIRI KHALID, MEDIAS, "Médias et communication au Maroc"

Media sequences list

Screenshot of the Media sequences list interface:

- Row 1:**
 - Thumbnail:** MEZOUE SALAHEDDINE, MINISTRE, MINISTERE DE L'INDUSTRIE, DU COMMERCE ET DE LA MISE A NIVEAU DE L'ECONOMIE, GOUVERNEMENT, QUATRE PARTS
 - Details:** Support : TV 2M, Emission : JT 20H45, Rubrique : ECONOMIE NATIONALE, Le : 01/08/2007 à : 20:55:50
 - Subject:** Sujet : اجتماع لجنة الاستشارات مع محسن فخراني
 - Time:** 20:00:20
- Row 2:**
 - Thumbnail:** ALAMI MOULAY HAFID, PRESIDENT, CONFEDERATION GENERALE DES ENTREPRISES DU MAROC, ORGANISATIONS PROFESSIONNELLES, INTERVENANTS SYND. ET PROFES.
 - Details:** Support : TV 2M, Emission : JT 20H45, Rubrique : ECONOMIE NATIONALE, Le : 01/08/2007 à : 20:54:30
 - Subject:** Sujet : programme économique électoral du pps
 - Time:** 20:00:23
- Row 3:**
 - Thumbnail:** BIADILLAH CHEIKH MOHAMED, MINISTRE, MINISTERE DE LA SANTE, GOUVERNEMENT, QUATRE PARTS
 - Details:** Support : TV 2M, Emission : JT 20H45, Rubrique : EDUCATION & FORMATION, Le : 01/08/2007 à : 20:50:02
 - Subject:** Sujet : منتدى عن برنامج في تكوين الأطباء ورفع من عدد عددي الماممات المغاربة
 - Time:** 20:00:24
- Row 4:**
 - Thumbnail:** EL MALKI HABIB, MINISTRE, MINISTERE DE L'EDUCATION NATIONALE ET DE L'ENSEIGNEMENT SUPERIEUR, GOUVERNEMENT, QUATRE PARTS
 - Details:** Support : TV 2M, Emission : JT 20H45, Rubrique : EDUCATION & FORMATION, Le : 01/08/2007 à : 20:49:18
 - Subject:** Sujet : منتدى عن برنامج في تكوين الأطباء ورفع من عدد عددي الماممات المغاربة
 - Time:** 20:00:30
- Row 5:**
 - Thumbnail:** MEZOUE SALAHEDDINE, MINISTRE, MINISTERE DE L'INDUSTRIE, DU COMMERCE ET DE LA MISE A NIVEAU DE L'ECONOMIE, GOUVERNEMENT, QUATRE PARTS
 - Details:** Support : TV Al Oula, Emission : JT 20 H 30, Rubrique : ECONOMIE NATIONALE, Le : 01/08/2007 à : 20:49:14
 - Subject:** Sujet : التوقيع على اتفاقية 2007 مع شركة دوكون سلامة على إثبات مراد مستوى التصدير لهذه المترفة
 - Time:** 20:00:16

2007 Elections: Convention : HACA - media public sector 13 March 2007



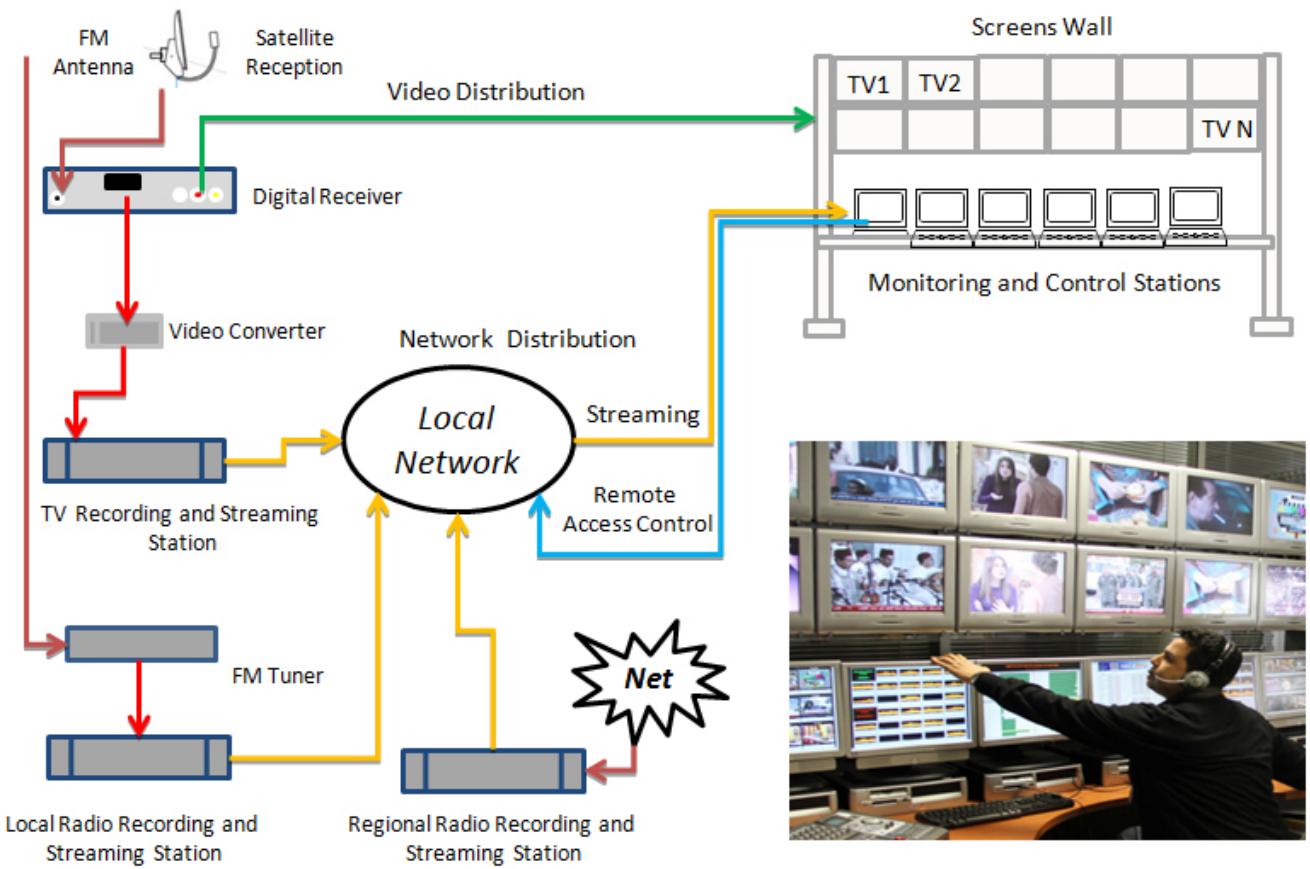
TECHNICAL MONITORING



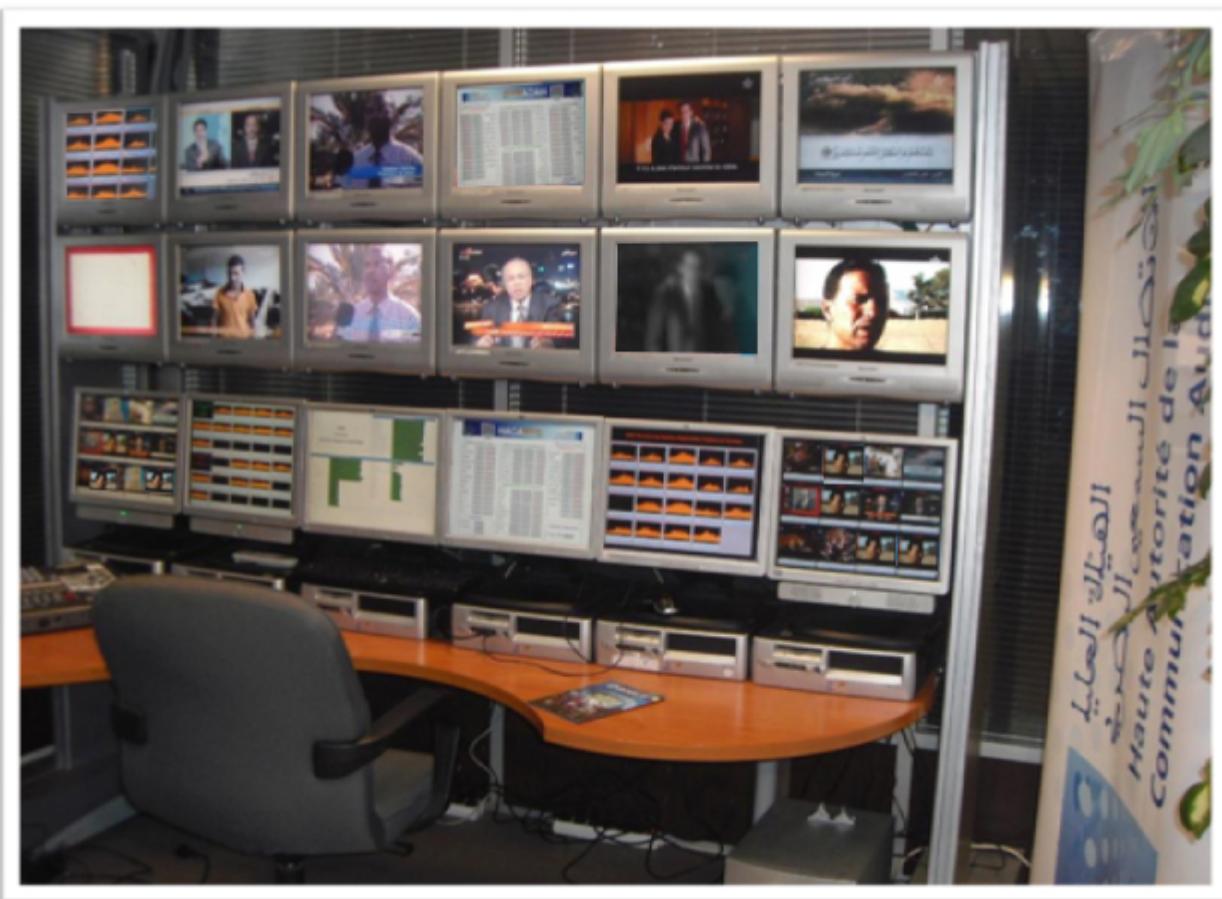
Technical Monitoring

- Technical monitoring allows live and continuous video and audio signal control
 - The different screens show a mosaic of TV, and Radio programs (with the name of each channel) as they are being recorded
 - It allows viewing direct audio and video streaming from the recording servers (main and back-up)
-
- **Another feature is the remote access control of every machine in the « IT room » as well as in the different regions of Morocco where HMS is installed à centralized management**

System Diagram of Monitoring and Remote Control



Monitoring



National Audiovisual Services: 57

24h/24h 7J/7J

- ✓ 38 Radio et 19 TV channels
 - 10 TNT channels
 - 9 TV channels via satellite
 - 16 National Radio channels
 - 22 Regional Radio channels

- ✓ Programs archiving since July 2007



Media Storage and Archiving

22 Distant Radios

1. Cap radio
2. MFM Atlas
3. MFM Chamal
4. MFM Orientale
5. MFM Sahara
6. MFM Saiss
7. MFM Sous
8. Radio Plus Agadir
9. Radio Plus Casablanca
10. Radio Plus Fès
11. Radio Plus Marrakech
12. SNRT Agadir
13. SNRT Al Hoceima
14. SNRT Casablanca
15. SNRT Dakhla
16. SNRT Fès
17. SNRT Laayoune
18. SNRT Marrakech
19. SNRT Meknès
20. SNRT Oujda
21. SNRT Tanger
22. SNRT Tétouan

16 National Radios

1. 2M
2. Amazigh
3. Aswat
4. Atlantic
5. Casa FM
6. Chada FM
7. Chaîne Inter
8. Coranique
9. Hit radio
10. Luxe
11. Mars
12. Med
13. Medina
14. Médi 1
15. Nationale
16. Sawa

19 TVs

Terrestrial

1. Al Oula
2. TV 2M
3. MEDI 1 TV
4. Al Maghrebia
5. Arrabia
6. Arriyadis
7. Assadisa
8. TV Laayoune
9. Aflam TV
10. TV amazigh

Satellite

1. Al Oula Sat
2. TV 2M Monde
3. Médil Sat
4. Al Maghrebia Sat
5. Arrabia Sat
6. Arriyadis Sat
7. Assadisa
8. TV Laayoune
9. TV amazigh

A complete and Turnkey Solution and expertise



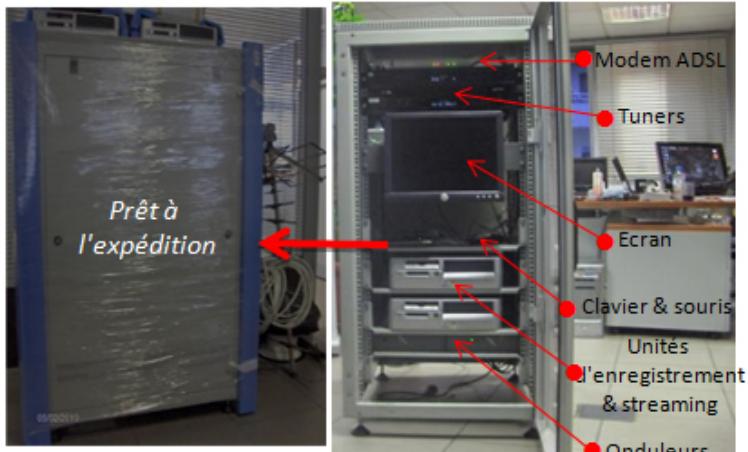
Signal Reception



Rack assembly and hardware installation



Hardware and Software (HMS solution)
Installation and configuration



A Rack model for media Transfer in a region containing one Radio service



A Rack model for audiovisual programs acquisition

Made in HACA



**TV and Radio Programs Monitoring Technical System in HACA
The Software Package « HMS »**

International Cooperation

Support for programs monitoring

International Support

| Regulator/Country | Nb TVs | Nb Radios | Total |
|---------------------------|------------|------------|-------------|
| CSC Niger | 12 | 33 | 45 |
| HAICA Tunisia | 48 | 42+4 | 90+4 |
| HAAC Benin | 12 | 24 | 36 |
| CNRA Senegal | 24 | 36 | 60 |
| HAPA Mauritania | 12 | 12 | 24 |
| CSA Belgium | 36 | 36 | 72 |
| HCC Tchad | 2 | 11 | 13 |
| Total | 156 | 198 | 344 |



- Signature of the agreement on October 12th 2015
- Installation on January 2016;
- Data center to record :
 - 33 Radios
 - 12 TVs
- Software installation and training:
 - HMS Acquisition;

- HMS Media Library;
- HMS Pluralism;
- Supervisor's room design;
- Reception of two trainees at HACA from 16 to 20 November 2015.



HAICA Tunisia 2014

- Installation August 2014;
- Data center to record :
 - 42 Radios (18 distant)
 - 24 TVs
- Software installation and training :
 - HMS Acquisition;
 - HMS Media Library;
 - HMS Pluralism;
- Design of 3 rooms for 30 supervisors;
- Setting control screens for programs recording;



HAAC Benin 2014

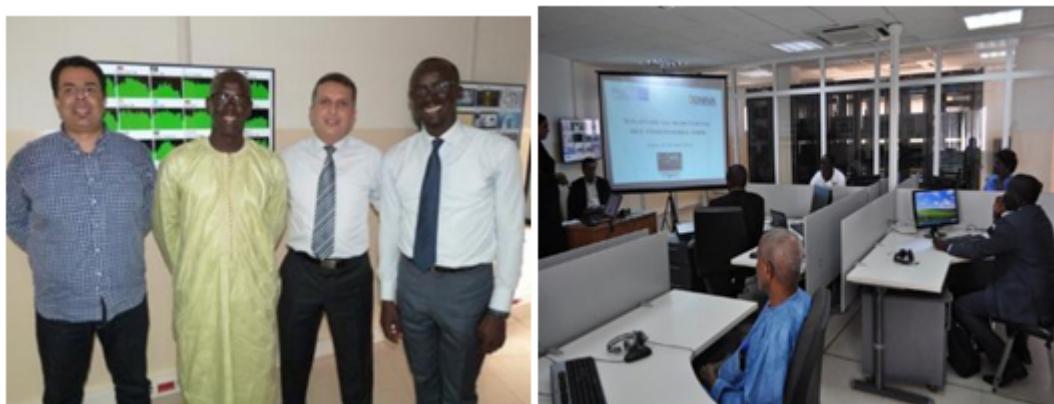
- Installation from 01 to 14 June 2014;
- Data Center to record:
 - 24 Radios
 - 12 TVs
- Software installation and training :

- HMS Acquisition;
- HMS Media Library;
- HMS Pluralism;
- Design of a room for 12 supervisors;
- Setting control screens for programs recording;



CNRA Senegal 2014

- Installation from 13 to 30 April 2014;
- Data Center to record :
 - 36 Radios and 24 TVs
- Software installation and training :
 - HMS Acquisition;
 - HMS Media Library;
 - HMS Pluralism
- Support Mission from 25 to 31 May 2014 :
 - M. Nadir Taher, DSP et Mme Amal Haider, UIQ.
- Design of a room for 16 supervisors;
- Setting control screens for programs recording;





HAPA Mauritania 2013



- Installation from 26 June to 08 July 2013
- Data Center to record :
 - 12 FM Radios
 - 12 TVs
- Software installation and training :
 - HMS Acquisition;
 - HMS Media Library;
 - HMS Pluralism;
- Support Mission for:
 - Legislative Elections of 23 November 2013





- Presidential Elections of 21 June 2014
-



CSA Belgium 2011

- Installation at Brussels from 05 to 25 June 2011
- Data Center to record :
 - 18 FM Radios
 - 18 IP Radios
 - 36 TVs (hertzian, cable, Digital)
- Software installation and training :
 - HMS Acquisition;
 - HMS Media Library;
 - HMS Sampling;
- Maintenance Mission at Brussels from 13 to 16 January 2014
 - Support request for the relocation to the new premises in June 2015



HCC Tchad 2011

- Training mission in Tchad from 25 to 27 October 2010
 - M. Noureddine AFAYA, Ex. Member of CSCA
 - M. Najib BOUEZMARNI
- Installation at N'Djamena from 08 to 15 May 2011
- Data Center to record :
 - 11 Radios
 - 2 hertzian TVs
- Software installation and training :
 - HMS Acquisition;
 - HMS Media Library;
 - HMS Pluralism;
- Design of a room for 8 supervisors;
- HACA received two trainees from HCC :
 - M. Ali Abatcha, Webmaster and in charge of monitoring (April 2013)
 - M. Nouri Aboutiman, Technical Manager (September 2014)





Perspectives

Several countries have expressed their interest in HMS solution :

[Togo](#)



[Mali](#)



[Cameroon](#)



[Moldova](#)



[Tanzanie](#)



Download :

- [HMS Brochure](#) [2]
 - [Acquisition procedure](#) [3]
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Links

- [1] <https://www.haca.ma/en/javascript%3A%3B> [2]
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