

Kingdom of Morocco



الهيئة العليا
لاتصال السعيي البصري
ⵍⵓⵎⵎⵓⵔ ⵏ ⵏⵉⵙⵓⵔ ⵏ ⵏⵉⵙⵓⵔ
Haute Autorité de la
Communication Audiovisuelle

HACA  **MEDIA**
Solutions 

**PROGRAMS MONITORING SYSTEM
HMS**

The IT Division UIQ (Missions)

- ✓ Development of Software and Information Systems that meet the requirements of HACA internal management as well as regulation;
- ✓ Efficient and reliable storage and archive of audiovisual Data;
- ✓ The production of reliable quantitative audiovisual data while meeting the needs of programs monitoring and contents analysis process and respecting the required quality standards;
- ✓ Software, information system and IT infrastructures maintenance and update in order to satisfy the strategic requirements of the institution;

The IT Division UIQ (Organization)

The IT Division, that has 23 executives and agents, is organized in three units, as follows:

- ✓ IT systems Unit;
- ✓ Data production Unit;
- ✓ Software development Unit;



TV and Radio Programs Monitoring Technical System in HACA

The Software Package « 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 → 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

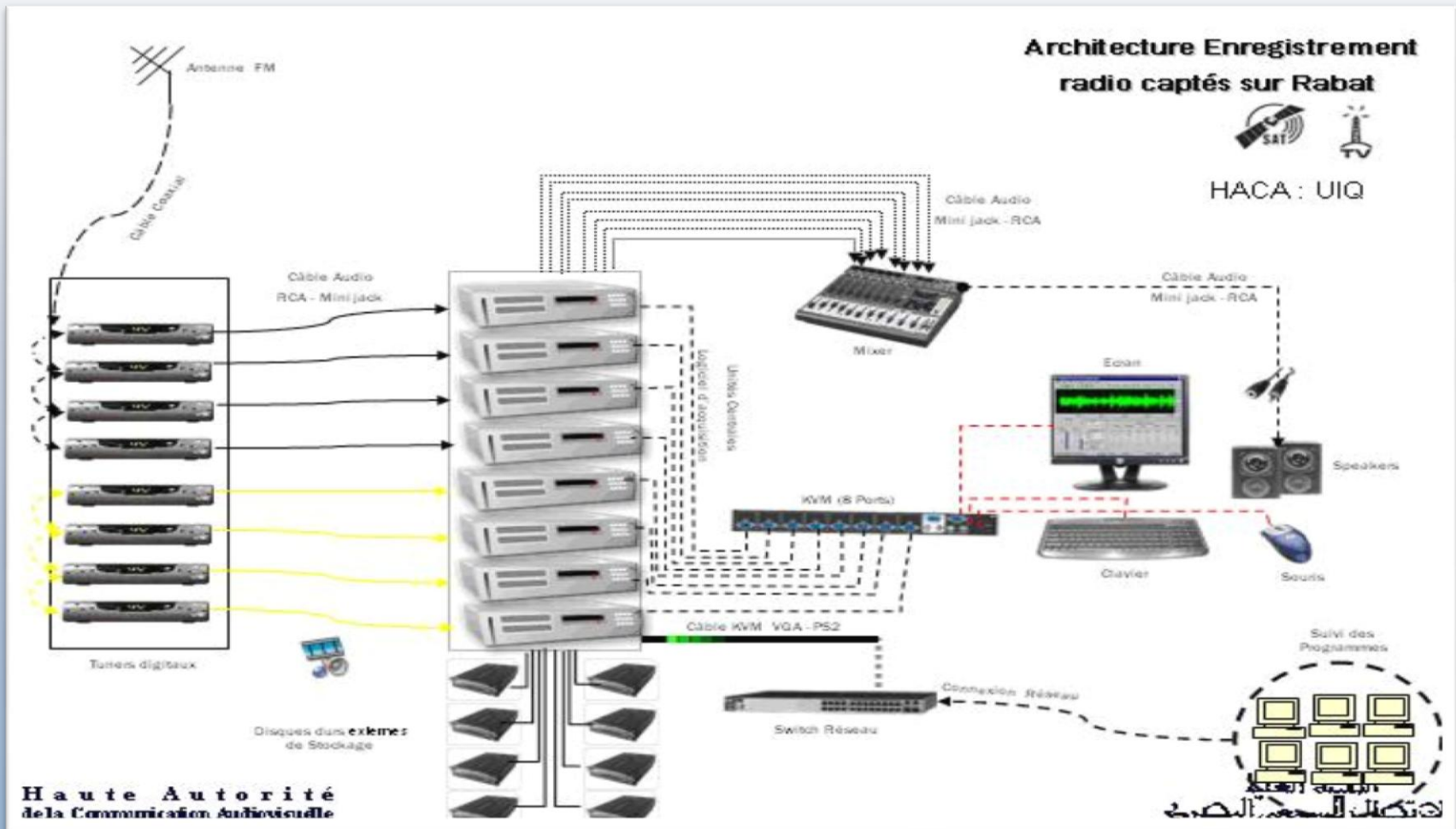


HMS Acquisition

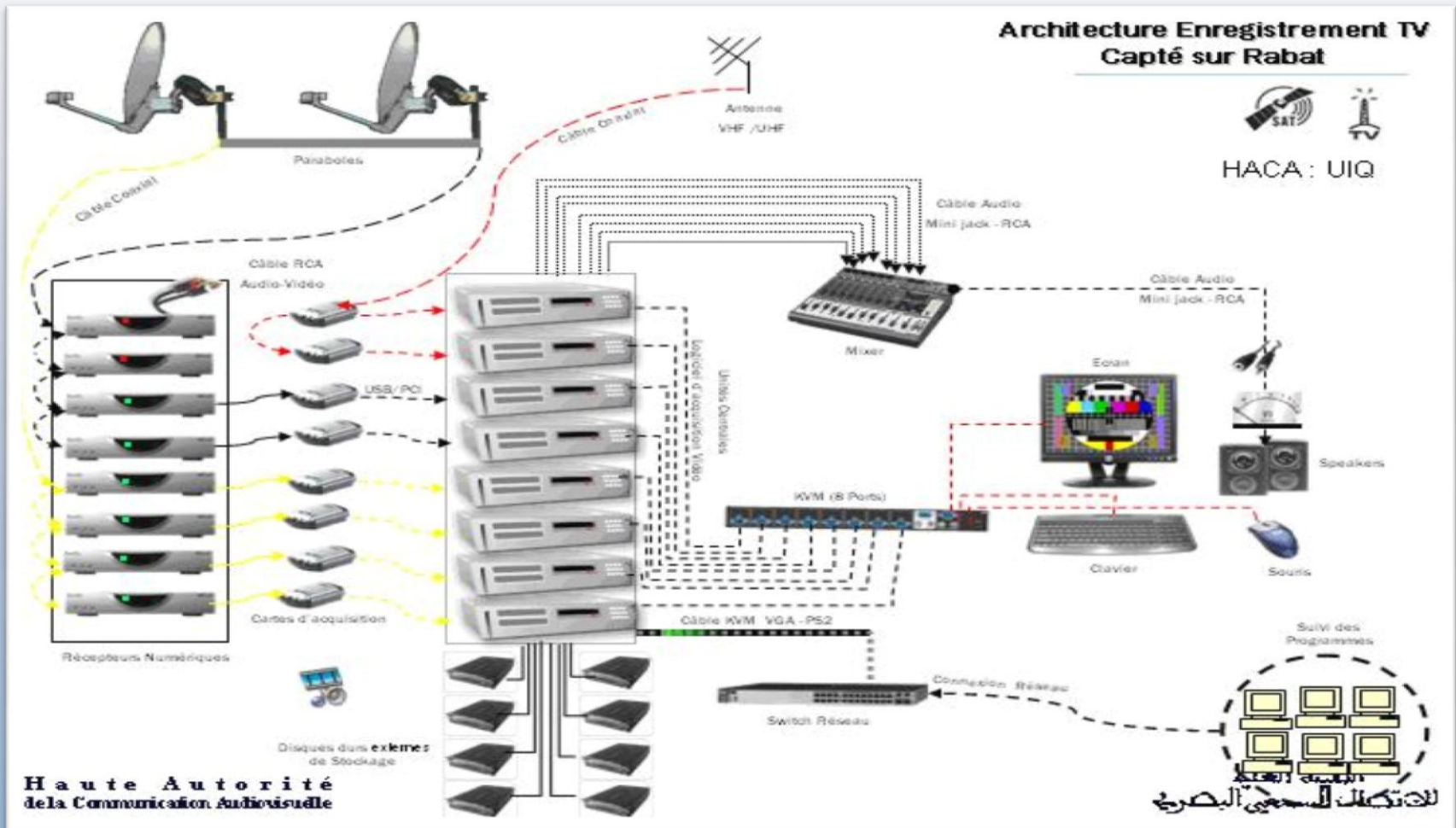
This software allows TV and Radio signals reception **24/24** and **7/7**, recording, storage and archive for analog and digital video and audio broadcast, or via satellite.

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



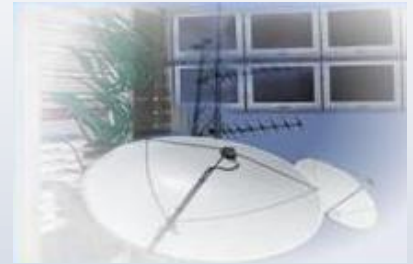
System Diagram: Reception and Recording of TV channels in HACA



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 :

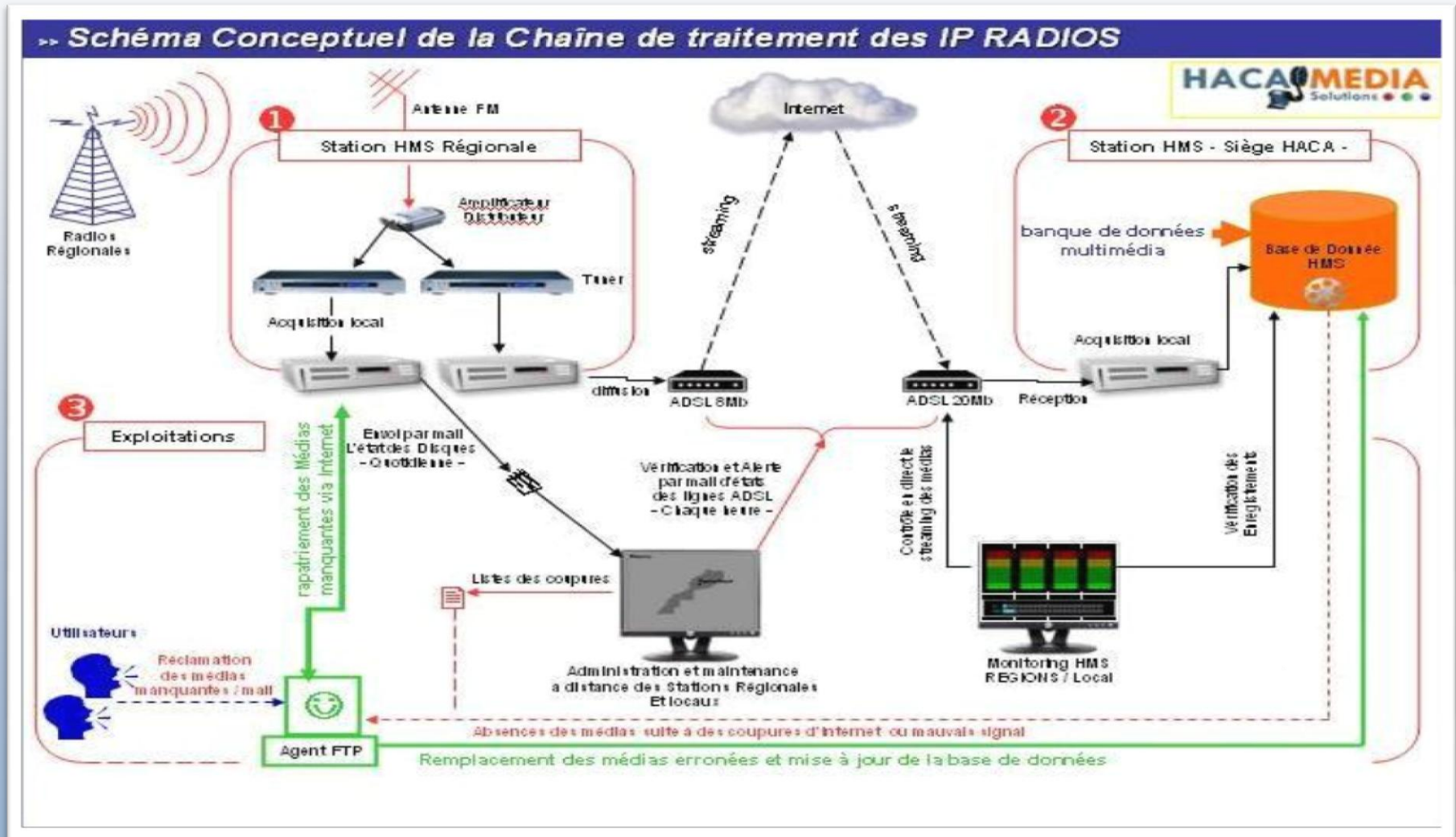
- Workstations equipped with « HMS Acquisition »: 2 Workstations for each TV or Radio Channel to record
- audio/video converters



✓ 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



Regional HMS Stations

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

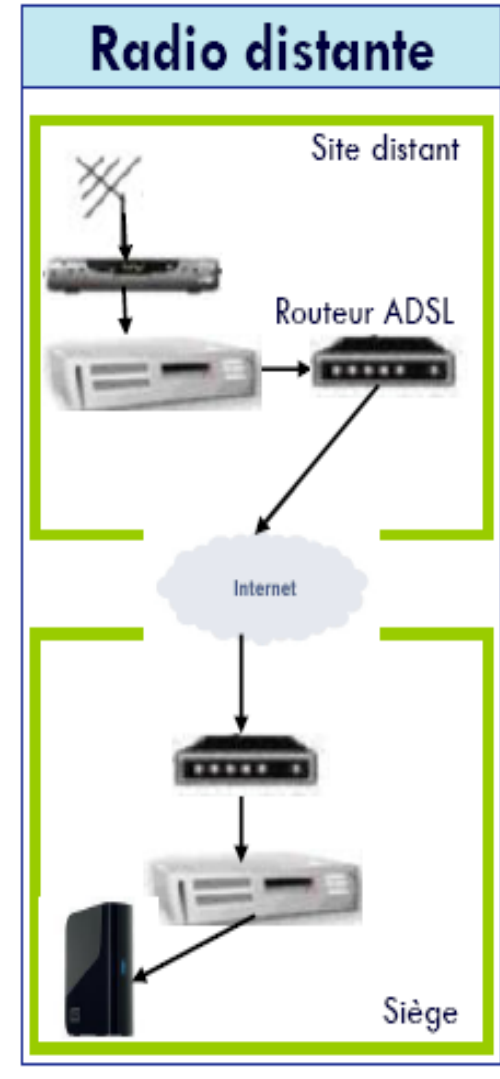
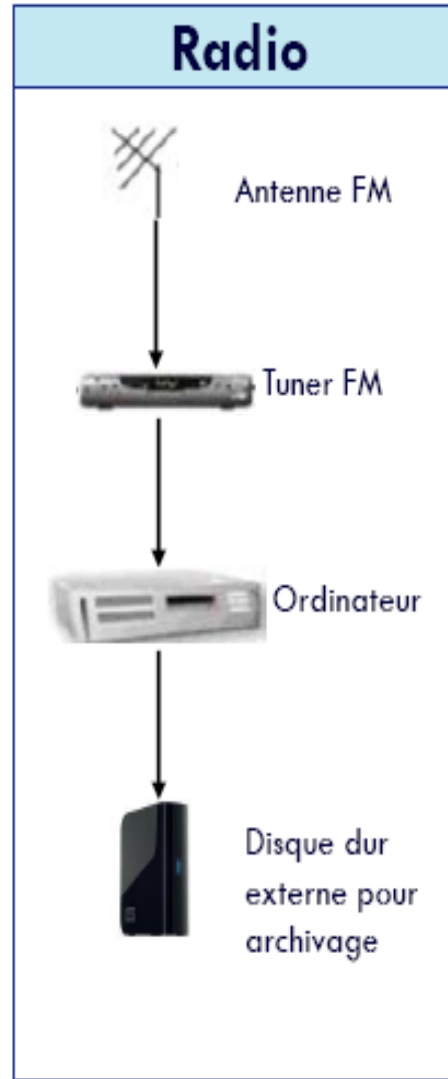
An 8 MB/s (min) Internet (ADSL) connection with a fixed IP address in the regional site, and another 20 MB/s (min) Internet (ADSL) connection with a fixed IP address in HACA headquarters.



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 → Machines backup, Disks Backup

HMS Acquisition (Overview)



HMS Media Library



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 HACCA

HMS Media Library

TV
TV 2M
TV 2M Sat
TV Afiam
TV Al Aoula
TV Al Aoula Sat
TV Al Maghreb
TV Arrabia
TV Arriyadia Sat
TV Arriyadia TNT
TV Assadissa
TV Laayoune
TV Médi 1
TV Médi1 Sat
TV Tamazight
Radios locales
La radio Internationale
Radio 2M
Radio Amazigh
Radio Aswat
Radio Atlantic
Radio Casa FM
Radio Chada FM
Radio Climat
Radio Hit
Radio Luxe
Radio Mars
Radio Med
Radio Médi 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

Marq. début Préc. 16/11/2016 21:01:07 Suiv. Marq. Fin

Informations

Recherche d'un programme

Date & heure : 16/11/2016 21:00:00 [Atteindre](#) [Annotation](#)

Annotation et suivi d'un programme

Debut Fin

Programme

Catégorie

Déclencheur

Domaine

Observations

Partagée avec

- BOUEZMARNI Najib
- BOURARA Bouchra
- FILALI NACHIT Houda
- Hamza TAMOUH
- KHAFAJI Abderrahim
- LYAZGHI Mouncif
- MOUHAJID Amine

[Enregistrer ...](#) [Annuler](#)

Liste des affaires traitées

Code	Service	Programme	Catégorie	Dossier	Date	H début	H fin	Commentaire
1042	TV Médi 1	نشرة رياضية	-	-	01/03/2016	21:10:09	21:19:14	ras
170	TV Al Aoula	العالم الرياضي	-	-	07/02/2016	22:55:30	23:43:30	
168	TV Al Aoula	14:20 نشرة الأخبار	-	-	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



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

The screenshot displays the WIPO PATENTSCOPE interface. At the top, the WIPO logo and 'PATENTSCOPE' title are visible, along with the tagline 'Search International and National Patent Collections'. A navigation bar includes 'Search', 'Browse', 'Translate', 'Options', 'News', 'Login', and 'Help'. The breadcrumb trail reads 'Home > IP Services > PATENTSCOPE'. The main content area shows the patent title '2. (MA29818) Système de comptabilisation des temps de passage sur un document audiovisuel' and tabs for 'National Biblio. Data', 'Description', 'Claims', and 'Documents'. Below this, there is a 'Permanent Link/ Bookmark' field with a link icon. The patent details are as follows:

- 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:**
- Title:** (FR) Système de comptabilisation des temps de passage sur un document audiovisuel
- Abstract:** (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...

HMS Pluralism

Intervenant

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

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

Photo

Informations

Rubrique MEDIAS **Position:** -
Sujet SEMINAIRE INTERNATIONAL SUR LA CONSERVATION DES ARCHIVES
Remarques
Temps
 Parole
 Antenne
Période
 Normale
 Pré-campagne électorale
 Campagne électorale
Présentation
 Expression directe
 Invitation au plateau
 Meeting
Région Choisir une région **Nature** Nationale
Localité 0
Langue ARABE

Timing (In/Out)

Début 31/10/2016 12:58:36 **Fin** 31/10/2016 12:58:51 **Durée** 00:00:16.C

[Projet](#) | [Ajouter](#) | [Modifier](#) | [Supprimer](#) | [Nouveau](#)

[Suspendre](#) | [Supprimer projet](#) | [Archive Ok](#) | [Retourner](#)

31/10/2016 12:58:36	12:58:52	00:00:16	LEMIRINI EL OUAHABI AMINA
31/10/2016 13:12:21	13:12:58	00:00:37	AYACHE MOHAMED

Suspendu 58:49

[-60](#) [-30](#) [-15](#) [-5](#) [-ZAr](#) [Play](#) [+ZAv](#) [+5](#) [+15](#) [+30](#) [+60](#)

[Marq. début](#) [Préc.](#) 31/10/2016 12:58:49 [Suiv.](#) [Marq. Fin](#)

AYACHE MOHAMED	PRESIDENT COMMUNE RURALE	RNI	MAJ 00:00:37
LEMIRINI EL OUAHABI AMINA	PRESIDENTE	HACA-CSCA	00:00:16

HMS Pluralism : (Example of Results)

Normal period

- (16) Liste des séquences
- (1) Liste détaillée par date
- (2) Liste détaillée par intervenant
- (3) liste classement / rubrique / sujet
- (4) Liste condensée par partis des équilibres politiques
- (5) Liste détaillée des équilibres politiques
- (6) Relevé des temps d'interventions politique par heure
- (7) Interventions par personnalité triées par la durée totale d'intervention
- (8) Intervention par classement triées par la durée totale d'intervention
- (9) Intervention par catégorie triées par la durée totale d'intervention
- (10) Intervention par institution triées par la durée totale d'intervention
- (11) Nombre intervention par émissions
- (12) Tableaux croisés ...
- (17) Tendance

- (13) Obligations du cahier des charges relatives au pluralisme
- (18) Rapport complet
- (19) Pourcentage cumulés
- (20) Création d'un DVD/CD

Election period

- 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)

HMS Pluralism: (Obligations of decision 46-06)

Obligations du cahier des charges relatives au pluralisme

<< Précédent

Suivant >>

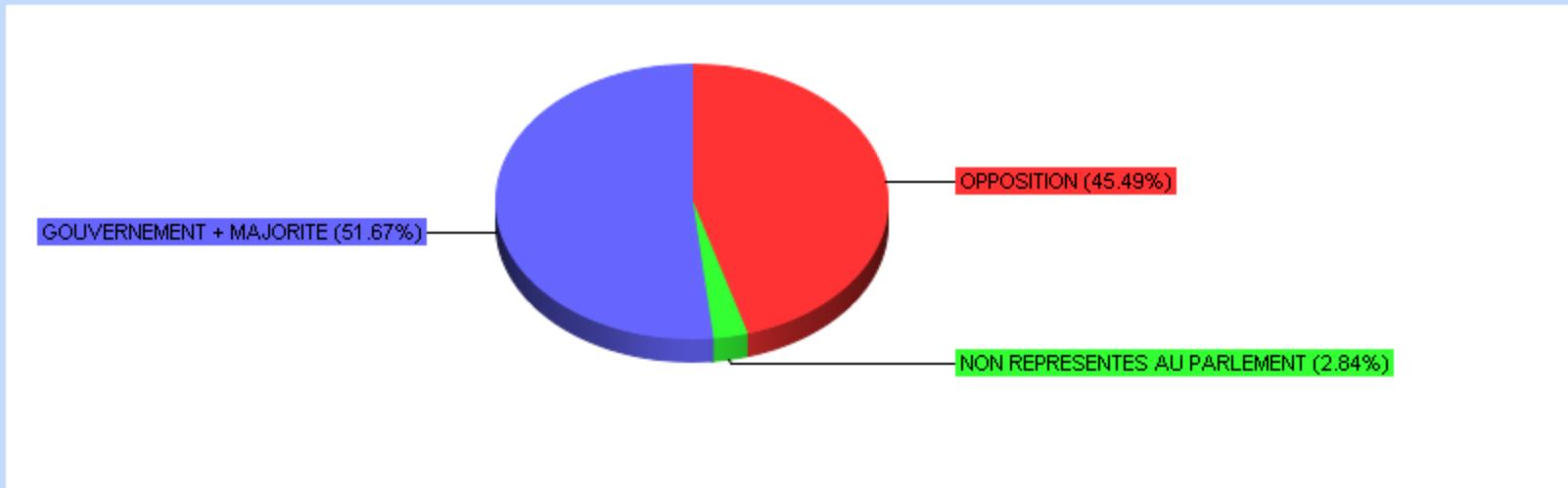
Critères

Liste éditée le : 30/11/2016 12:05:11 par BOUEZMARNI Najib

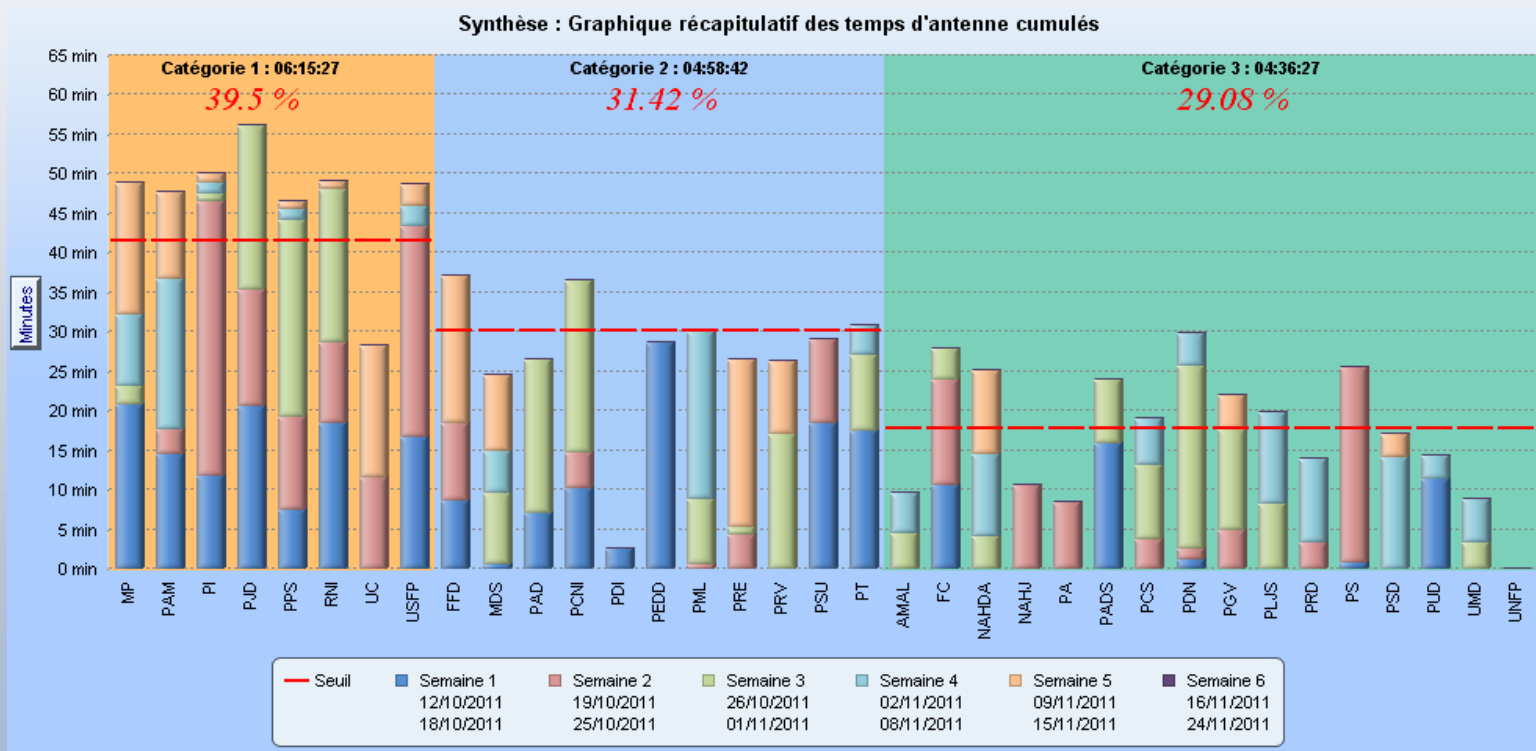
Période : 01/01/2016 00:00:00 - 31/03/2016 23:59:59 Support : [Radio Casa FM] Type émission : [MAGAZINES INFOS,AUTRES EMISSIONS]

Catégorie	Durée réelle		Obligation CC		Différence	
GOUVERNEMENT + MAJORITE	12:32:14	51.67%	14:33:28	60 %	-02:01:14	-8.33 %
OPPOSITION	11:02:16	45.49%	07:16:44	30 %	+03:45:32	+15.49 %
NON REPRESENTES AU PARLEMENT	00:41:17	2.84%	02:25:35	10 %	-01:44:18	-7.16 %

Répartition par catégorie incluse dans les obligations du cahier des charges



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

HMS Pluralism: Final Report Edition



HMS Pluralism: Search Module

Multi-criteria Search module

The screenshot displays the HMS Pluralism Search Module interface. At the top, there is a navigation bar with various icons. Below it, a search filter section titled 'Explorer' allows users to filter by Support, Personnalité, Type émission, Emission, Classement, Catégorie (set to 'GOUVERNEMENT'), Rubrique, Qualité, and Institution. A 'Sujet' field and a 'Période' range from 01/01/2010 to 01/04/2010 are also present. A central video player shows a news segment from 'TV Al Oula - JOURNAL DE NUIT - ARABE' featuring Hejira Ahmed Taoufiq. To the right, a sidebar provides details for the selected video, including the name 'HEJIRA AHMED TAOUFIQ', his title 'MINISTRE DE L'HABITAT, DE L'URBANISME ET DE L'AMENAGEMENT DE L'ESPACE', and a table of support statistics.

Support	Durée	Nb Interv.
Radio Amazighe	00:07:46	10
Radio Aswat	01:57:03	92
Radio Atlantic	03:54:11	205

Below the video player, the search results are displayed as a table with columns for Date, Durée, Personnalité, Rubrique, and Sujet.

Date	Durée	Personnalité	Rubrique	Sujet
2010-01-07 18:04:57	00:00:23	BENKHADRA AMINA	ENERGIE & MINES	يختص بتدشين محطة لتخزين و استقبال غاز الپروبان الجديدة
2010-01-07 18:07:09	00:00:22	NACIRI KHALID	COMMUNICATION	"يختص انطلي بئ القاء التلقية" الامازيغية
2010-01-07 18:33:43	00:00:32	BENKHADRA AMINA	ENERGIE & MINES	. يختص بتدشين محطة تخزين و استقبال غاز الپروبان الجديدة
2010-01-07 18:38:50	00:00:54	HEJIRA AHMED TAOUFIQ	HABITAT, BTP & URBANISME	L'intérêt de cette loi pour le locataire et le propriétaire
2010-01-07 18:48:23	00:00:14	NACIRI KHALID	MEDIAS	بمناسبة انطلي القاء الثامنة الامازيغية

HMS Pluralism: Media sequences list



00:00:20

MEZOUAR SALAHEDDINE, MINISTRE, MINISTERE DE L'INDUSTRIE, DU COMMERCE ET DE LA MISE A NIVEAU DE L'ECONOMIE, GOUVERNEMENT, QUATRE PARTS

Support : TV 2M, **Emission** : JT 20H45, **Rubrique** : ECONOMIE NATIONALE, **Le** : 01/08/2007 **à** : 20:55:50

Sujet : اجتماع للجنة الاستثمارات خصص لدراسة 30 مشروعا استثماريا مع مجموعة أمريكية



00:00:23

ALAMI MOULAY HAFID , PRESIDENT, CONFEDERATION GENERALE DES ENTREPRISES DU MAROC, ORGANISATIONS PROFESSIONNELLES, INTERVENANTS SYND. ET PROFES.

Support : TV 2M, **Emission** : JT 20H45, **Rubrique** : ECONOMIE NATIONALE, **Le** : 01/08/2007 **à** : 20:54:30

Sujet : programme économique electoral du pps



00:00:24

BIADILLAH CHEIKH MOHAMED, MINISTRE, MINISTERE DE LA SANTE, GOUVERNEMENT, QUATRE PARTS

Support : TV 2M, **Emission** : JT 20H45, **Rubrique** : EDUCATION & FORMATION, **Le** : 01/08/2007 **à** : 20:50:02

Sujet : كشف عن برنامج في تكوين الأطباء ورفع من عدد خريجي الجامعات المغربية



00:00:30

EL MALKI HABIB, MINISTRE, MINISTERE DE L'EDUCATION NATIONALE ET DE L'ENSEIGNEMENT SUPERIEUR, GOUVERNEMENT, QUATRE PARTS

Support : TV 2M, **Emission** : JT 20H45, **Rubrique** : EDUCATION & FORMATION, **Le** : 01/08/2007 **à** : 20:49:18

Sujet : كشف عن برنامج في تكوين الأطباء ورفع من عدد خريجي الجامعات المغربية



00:00:16

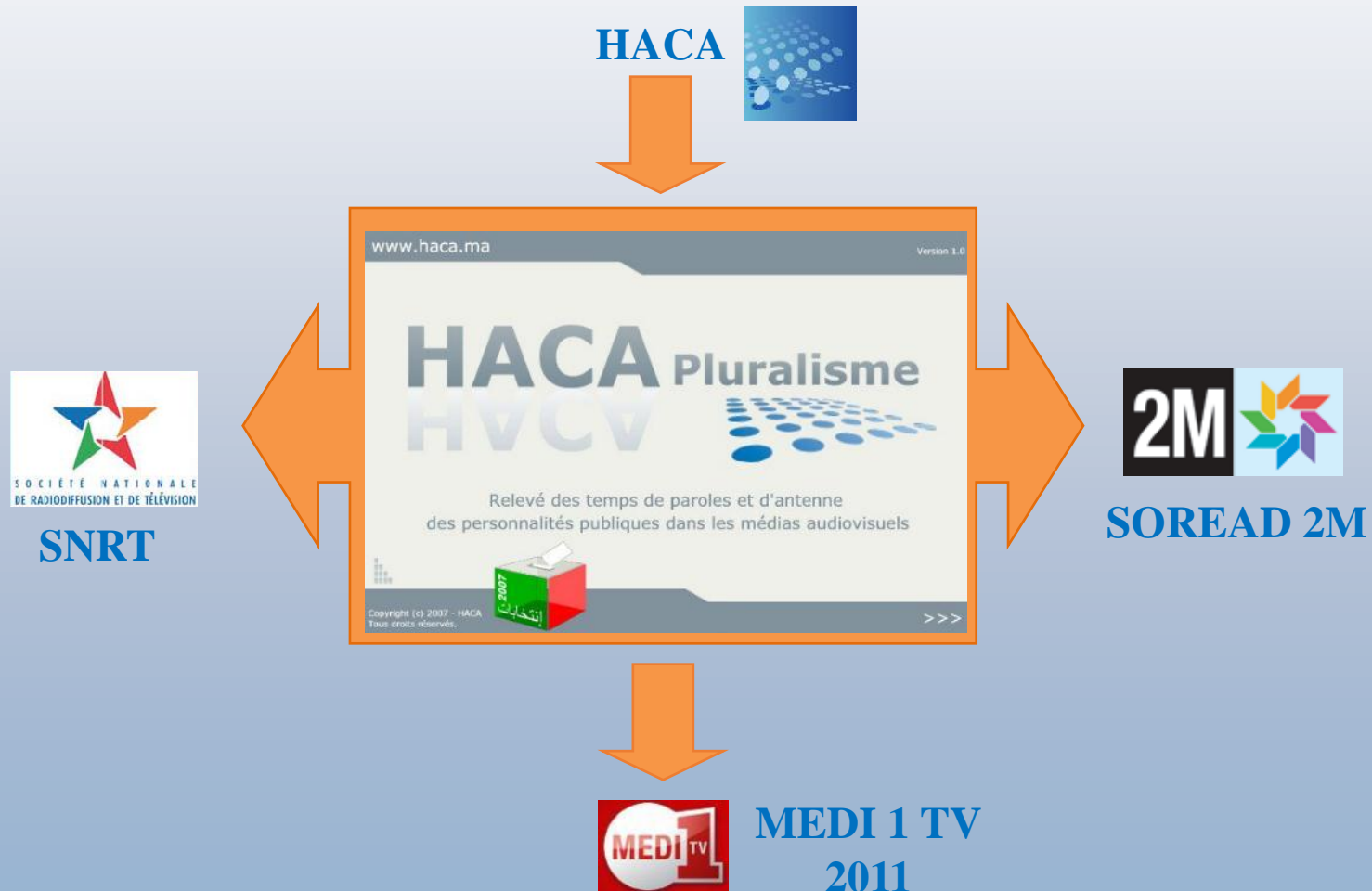
MEZOUAR SALAHEDDINE, MINISTRE, MINISTERE DE L'INDUSTRIE, DU COMMERCE ET DE LA MISE A NIVEAU DE L'ECONOMIE, GOUVERNEMENT, QUATRE PARTS

Support : TV Al Oula, **Emission** : JT 20 H 30, **Rubrique** : ECONOMIE NATIONALE, **Le** : 01/08/2007 **à** : 20:49:14

Sujet : التوقيع على اتفاقية تعاون مع شركة دويتشين ستضا عف إلى ثلاث مرات مستوى التصدير لهذه الشركة

2007 Elections: Convention : HACA - media public sector

13 March 2007



TECHNICAL MONITORING



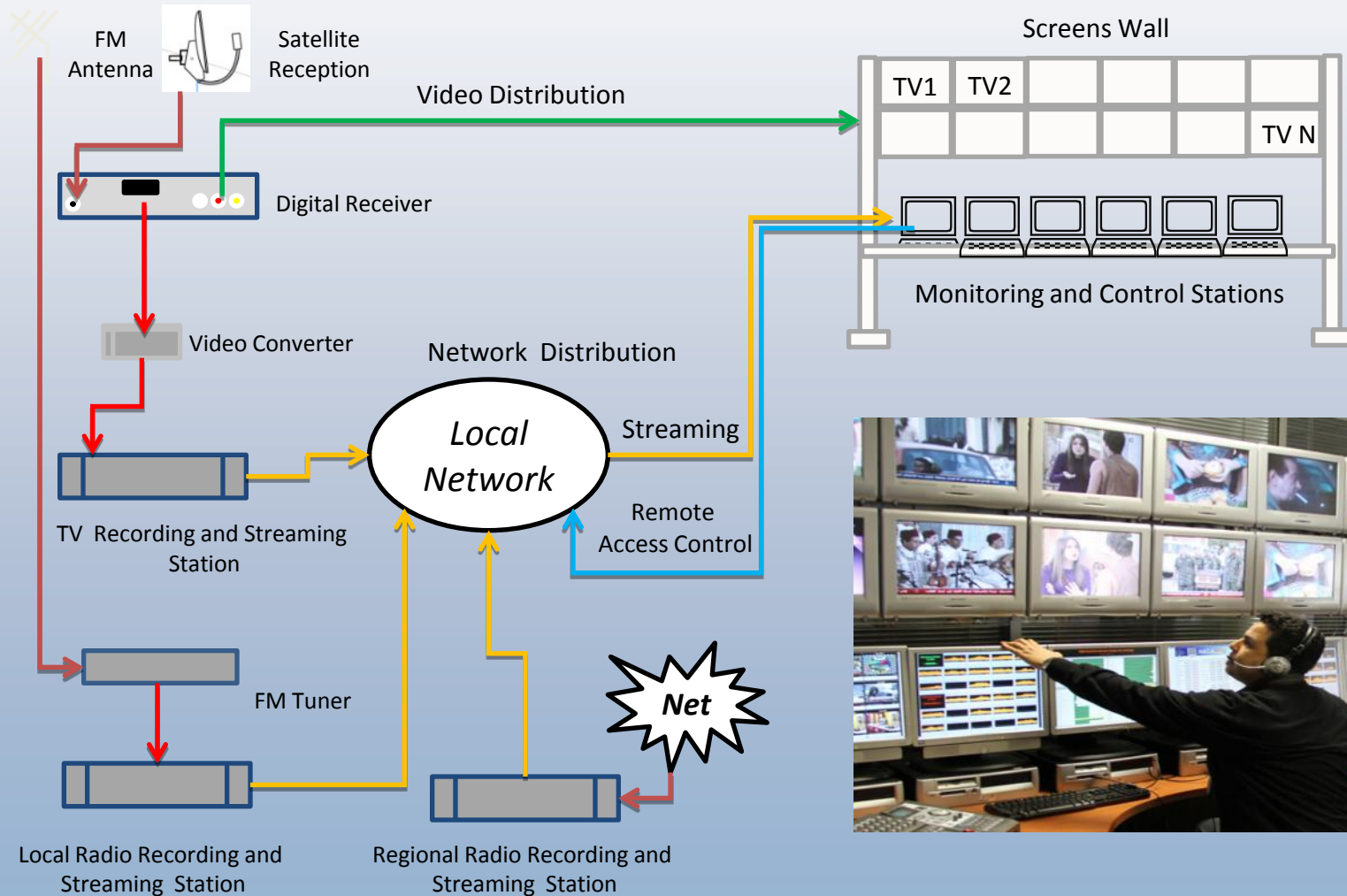
Technical Monitoring

- ✓ 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)

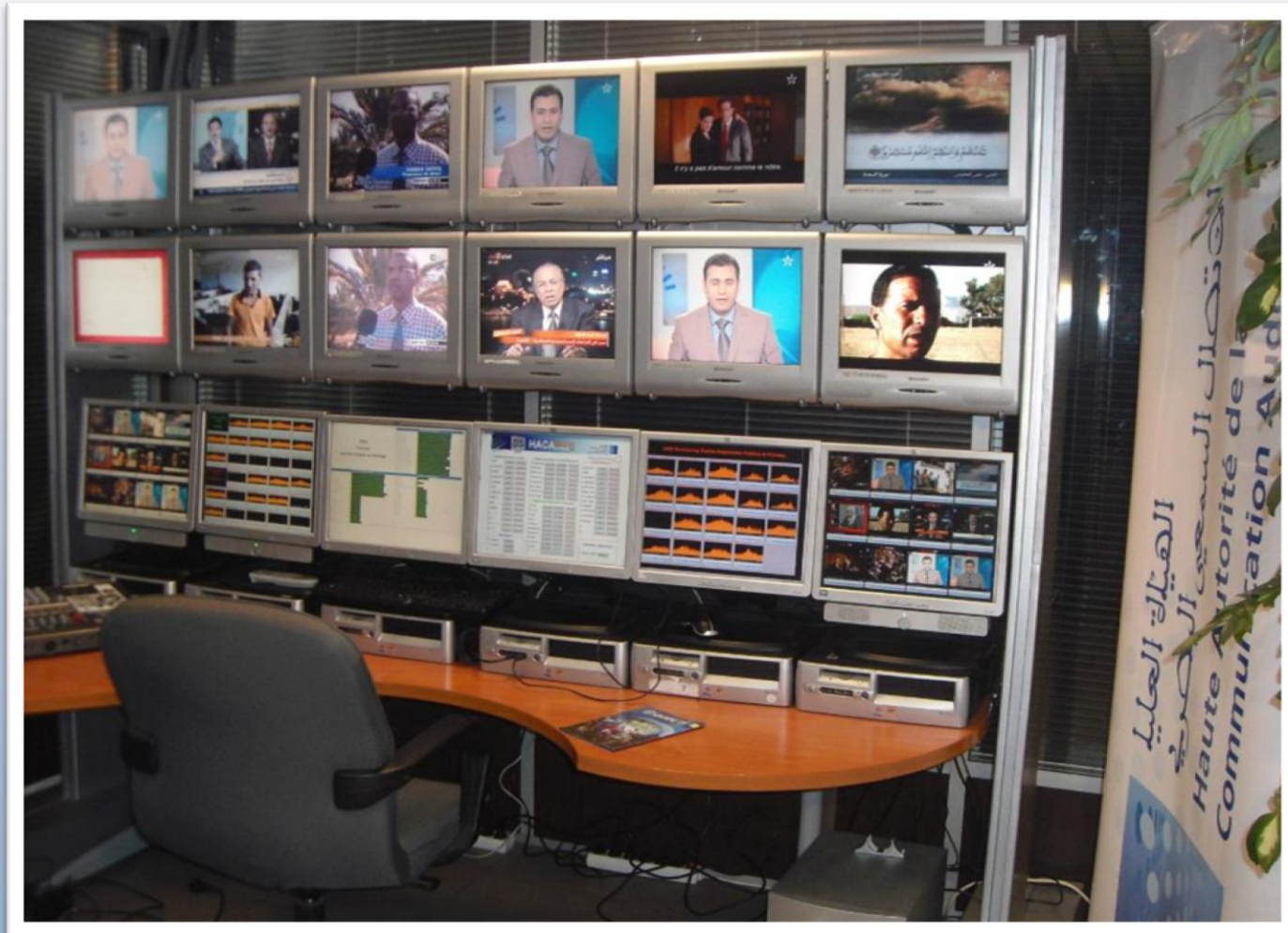


Another feature is the remote access control of every machine in the « IT room » as well as in the different regions of Morocco where HMS is installed → centralized management

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. Arrabiaa
6. Arriyadia
7. Assadisa
8. TV Laayoune
9. Aflam TV
10. TV amazigh

Satellite

1. Al Oula Sat
2. TV 2M Monde
3. Médi1 Sat
4. Al Maghrebia
5. Arrabiaa
6. Arriyadia Sat
7. Assadisa
8. TV Laayoune
9. TV amazigh

A complete and Turnkey Solution and expertise



Signal Reception



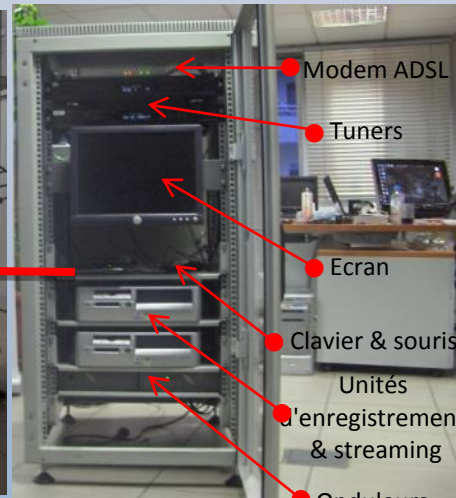
Rack assembly and hardware installation



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

CSC Niger 2016



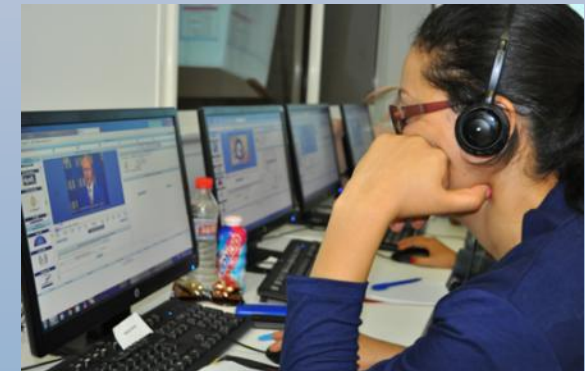
- ✓ Signature of the agreement on October 12th 2015
- ✓ Installation on January 2016;
- ✓ Data center to record :
 - 33 Radios
 - 12 TVs
- ✓ Software installation and training:
 - HMS Acquisition;
 - HMS Media Library;
 - HMS Pluralism;
- ✓ Supervisor's room design;
- ✓ Reception of two trainees at HACA from 16 to 20 November 2015.



HAICA Tunisia 2014



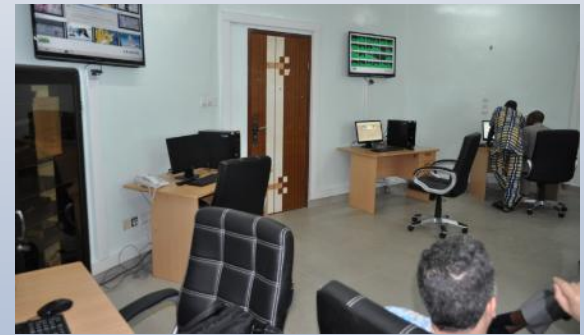
- ✓ Installation August 2014;
- ✓ Data center to record :
 - 42 Radios (18 distant)
 - 24 TVs
- ✓ Software installation and training :
 - HMS Acquisition;
 - HMS Media Library;
 - HMS Pluralism;
- ✓ Design of 3 rooms for 30 supervisors;
- ✓ Setting control screens for programs recording;





HAAC Benin 2014

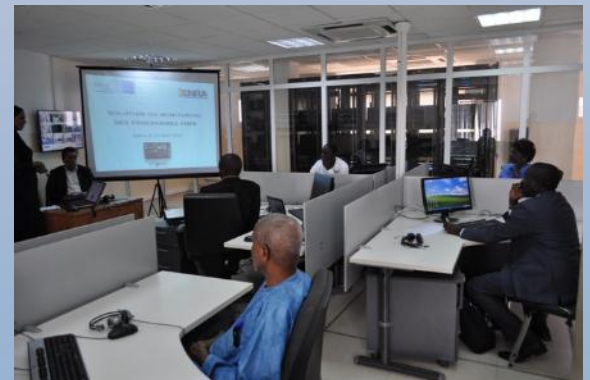
- ✓ Installation from 01 to 14 June 2014;
- ✓ Data Center to record:
 - 24 Radios
 - 12 TVs
- ✓ Software installation and training :
 - HMS Acquisition;
 - HMS Media Library;
 - HMS Pluralism;
- ✓ Design of a room for 12 supervisors;
- ✓ Setting control screens for programs recording;



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

CSA
CONSEIL SUPERIEUR
DE L'AUDIOVISUEL

- ✓ 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. Nouredine 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



THANK YOU FOR YOUR ATTENTION

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