



BBC
NEWS LABS

Innovation in the newsroom

MOS Running Order Manager and its application



@ben_nuttall

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BBC News Labs

- Innovation team within BBC News & BBC R&D
- Prototypes of new audience experiences
- Solutions to help journalists
- Research and trying out ideas
- bbcnewslabs.co.uk
- twitter.com/bbc_news_labs



Radio 4 Today programme



ToDAY

The year is 1957...

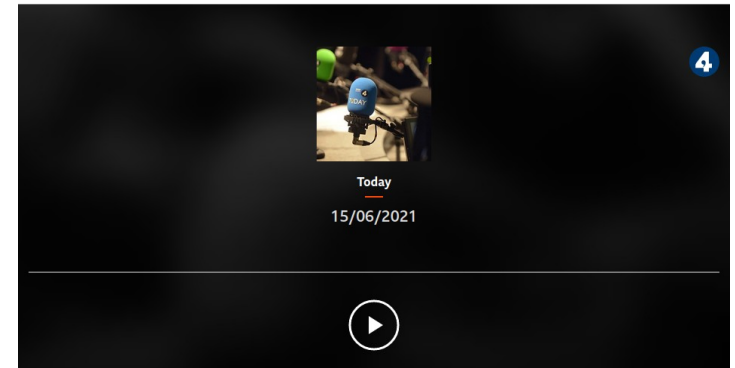


The year is 2021...



SOUNDS

Home Music My Sounds



Released On: 15 Jun 2021 Available for 28 days

News and current affairs, including Sports Desk, Weather and Thought for the Day.

More episodes Programme Website

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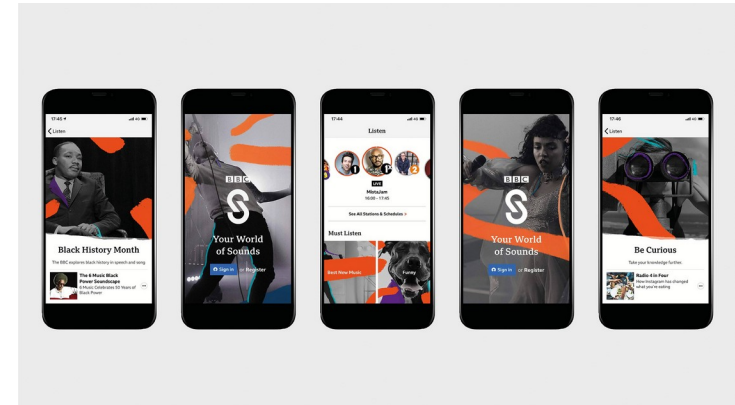
BBC Radio 4 Today @BBCr4today

"It stirred up lots of memories, what happened to Christian. I realised my career kind of evolved almost in a way, out of a need to have some kind of connection with his life"

@GabbyLogan tells @JustinOnWebb about the death of her brother Daniel from a heart condition.



12:20 PM - Jun 16, 2021 - SocialFlow



@ben_nuttall

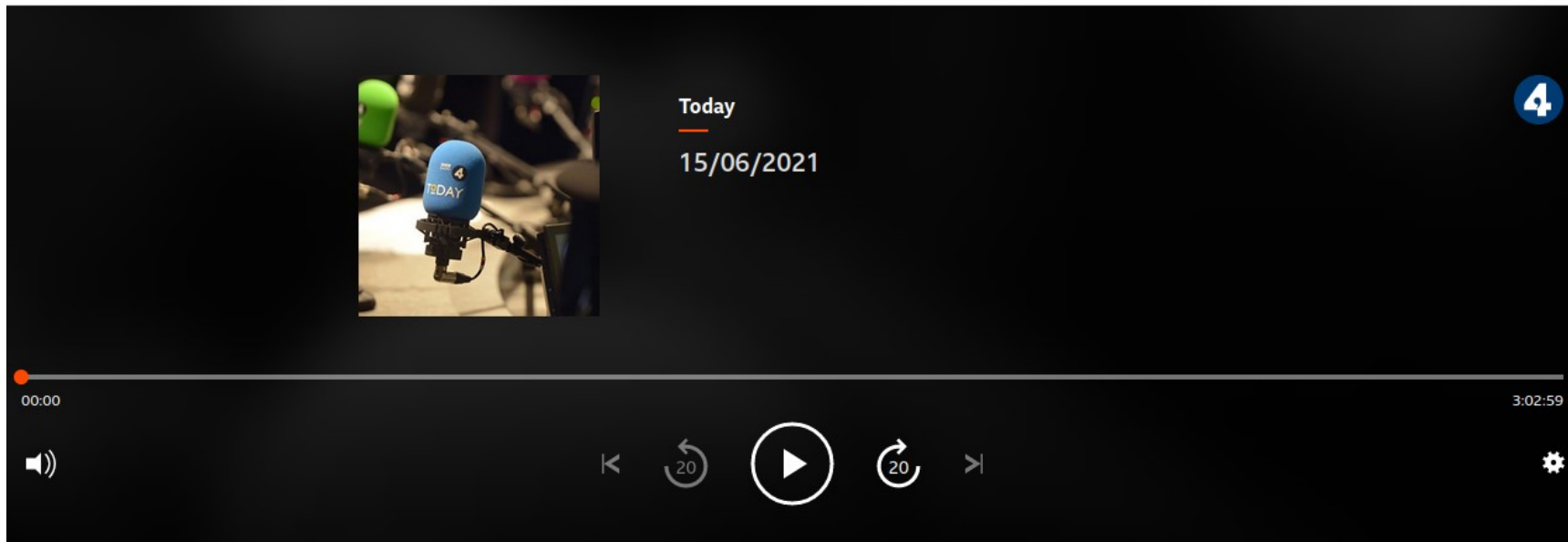
Production workflow - OpenMedia

Item	Final	Title	Section Title	Notes	Notes 2	Producer	Hold	Duration	Override	End Time	BlockOv
	Y	NEWS BULLETIN	Charles Carroll					00:00		08:00:00	
	Y	HEADLINES						00:33		08:00:33	
	Y	Q Care				Malik		01:22		08:01:55	
	Y	Q Care act						00:30		08:02:25	
	Y	Q Covid Regeneron				Judith		01:07		08:03:32	
	Y	Q Climate Change				Malik		01:04		08:04:37	
	Y	Q Gaza						00:19		08:04:56	
	Y	Q Biden Putin				Gail		01:24		08:06:21	
	Y	Q Inflation						01:05		08:07:26	
	Y	Q Cannabis sby						00:13		08:07:39	
	Y	Q Morgan						00:49		08:08:29	
	Y	Q Sign Language				Adam		01:00		08:09:30	
	Y	Q Bikini						00:21		08:09:51	
	Y	BULLETIN END						00:09	00:09	08:10:00	
	Y	CLIMATE	Nick	CLIMATE - Business News - Emily Sheehy	VCS - 11 - 11 10:30 10:42			10:30	10:30	08:20:30	
	Y	BIDEN GVOSDEV	Justin	Professor Walter D'Antonio	VCS			04:40	04:40	08:25:10	
	Y	SPORT 08:25	Nick	Earth Science	10:00 & 10:15			05:00	05:00	08:30:10	
	Y	RADIO 4 TRAIL	Justin					00:45	00:45	08:30:55	
	Y	WEATHER	Nick					00:15	00:15	08:31:10	
	Y	PROGRAMME IDENT	Justin					00:10	00:10	08:31:20	
	Y	NEWS SUMMARY 08:30		Charles Carroll				01:00	01:00	08:32:20	
	Y	TOGETHER	Justin	James Morgan & James McHenry	Zoom & Zoom 10:00			06:15	06:15	08:38:35	
	Y	GAZA	Nick	Tom Salomon	10:00			03:00	03:00	08:41:35	
	Y	AUSTRALIA	Justin	Tom Salomon	10:00			05:00	05:00	08:46:35	
	Y	BIZ INFLATION	Nick	Thomas O'Connell				02:15	02:15	08:48:50	
	Y	IVOR GURNEY	Justin	James Morgan				06:48		08:55:38	

Here's a 3 hour programme we made earlier

SOUNDS

 Home  Music  My Sounds





Today
15/06/2021

00:00 3:02:59

4

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News and current affairs, including Sports Desk, Weather and Thought for the Day.

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What if...

- What if we could enrich the digital offering by harvesting data from the running order?

Item	Final	Title	Section Title	Notes	Notes 2	Producer	Hold	Duration	Override	End Time	BlockOv
Y		NEWS BULLETIN						00:00		08:00:00	
Y		HEADLINES						00:33		08:00:33	
Y		Q Care				Malik		01:22		08:01:55	
Y		Q Care act						00:30		08:02:25	
Y		Q Covid Regeneration				Judith		01:07		08:03:32	
Y		Q Climate Change				Malik		01:04		08:04:37	
Y		Q Gaza						00:19		08:04:56	
Y		Q Biden Putin				Gail		01:24		08:06:21	
Y		Q Inflation						01:05		08:07:26	
Y		Q Cannabis sly						00:13		08:07:39	
Y		Q Morgan						00:49		08:08:29	
Y		Q Sign Language				Adam		01:00		08:09:30	
Y		Q Bikini						00:21		08:09:51	
Y		BULLETIN END						00:59	00:59	08:10:00	
Y		CLIMATE	Nick					10:30	10:30	08:20:30	
Y		BIDEN GVOSDEV	Justin	VCS				04:40	04:40	08:25:10	
Y		SPORT 08:25	Nick					05:00	05:00	08:30:10	
Y		RADIO 4 TRAIL	Justin					00:45	00:45	08:30:55	
Y		WEATHER	Nick					00:15	00:15	08:31:10	
Y		PROGRAMME IDENT	Justin					00:10	00:10	08:31:20	
Y		NEWS SUMMARY 08:30	Justin					01:00	01:00	08:32:20	
Y		TOGETHER	Justin					06:15	06:15	08:38:35	
Y		GAZA	Nick					03:00	03:00	08:41:35	
Y		AUSTRALIA	Justin					03:00	03:00	08:46:35	
Y		BIZ INFLATION	Nick					02:15	02:15	08:48:50	
Y		IVOR GURNEY	Justin					06:48	06:48	08:55:38	



SOUNDS Home Music My Sounds

Today
15/06/2021

00:00 3:02:59

Released On: 15 Jun 2021 Available for 28 days

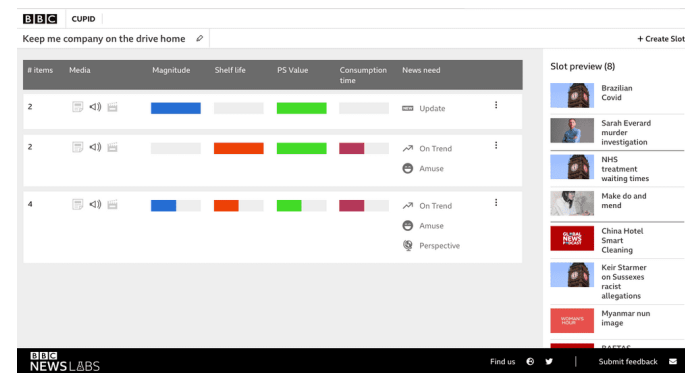
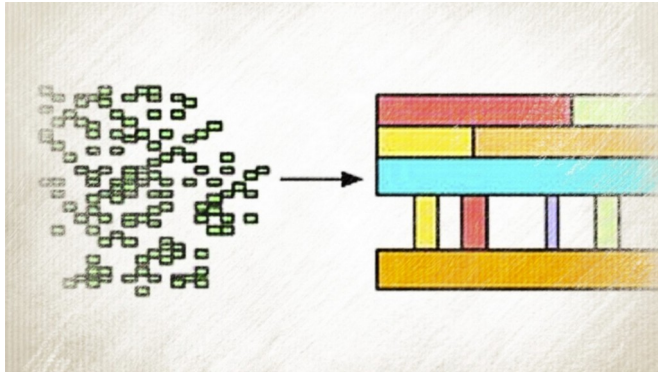
News and current affairs, including Sports Desk, Weather and Thought for the Day.

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What else...

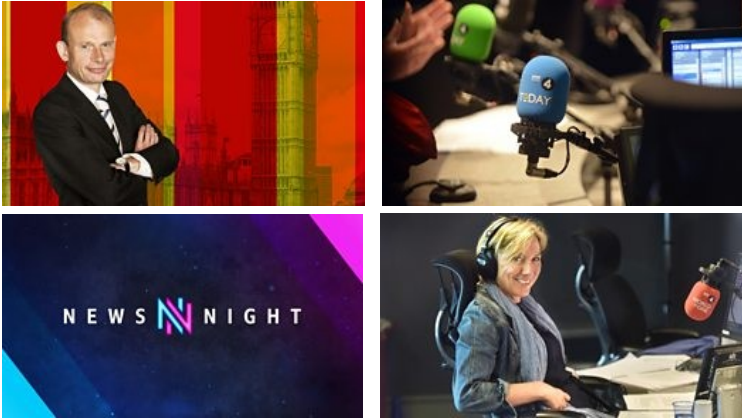
- Once we've re-applied the data to the content, what else does this allow us to do?



Personalisation opportunities

- Instead of:

You might like...



- More personalised:

You might like...



How do we extract running order data?

Item	Final	Title	Section Title	Notes	Notes 2	Producer	Hold	Duration	Override	End Time	BlockOv
	Y	NEWS BULLETIN	Charles Carroll					00:00		08:00:00	
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	Y	CLIMATE	Nick					10:30	10:30	08:20:30	
	Y	BIDEN GVOSDEV	Justin		VCS			04:40	04:40	08:25:10	
	Y	SPORT 08:25	Nick					05:00	05:00	08:30:10	
	Y	RADIO 4 TRAIL	Justin					00:45	00:45	08:30:55	
	Y	WEATHER	Nick					00:15	00:15	08:31:10	
	Y	PROGRAMME IDENT	Justin					00:10	00:10	08:31:20	
	Y	NEWS SUMMARY 08:30						01:00	01:00	08:32:20	
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	Y	GAZA	Nick					03:00	03:00	08:41:35	
	Y	AUSTRALIA	Justin					05:00	05:00	08:46:35	
	Y	BIZ INFLATION	Nick					02:15	02:15	08:48:50	
	Y	IVOR GURNEY	Justin					06:48		08:55:38	

The MOS protocol



Media Object Server (MOS™) Protocol v4.0

MOS Protocol version 4.0
Document Revision 560
Revision Date: June 7th, 2019

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This document is provided to You under the conditions outlined below. These conditions are designed to guarantee the integrity of the MOS™ Protocol and to ensure the compatibility of solutions implementing the MOS™ Protocol. Use or implementation of the MOS™ Protocol as described herein, may only occur if You agree to these conditions. Failure to follow these conditions shall void this license. "You" shall mean you as an individual, or, where appropriate, the company or other entity on whose behalf you are using this document, and includes any entity which controls, is controlled by, or is under common control with You.

You must agree to the following in order to use the MOS™ Protocol:

1. You must use and implement all messages defined by the MOS protocol MOS 4 Profiles as listed below per the profiles supported by your device.
2. You may not modify message names, order of defined tags within a message, tag structure, defined values, standards and constants.
3. You may not process messages in a means that is dependent on non-standard messages, tags or structures.
4. You may add additional tags to messages, but the modified messages must contain the defined minimum required tags for each message, in the order defined by this document.
5. Implementations of the MOS Protocol following the above guidelines may claim to be "MOS™ Compatible" or "MOS v4 Compatible"
6. If You add additional tags, it is strongly recommended these be included and encapsulated only within the provided <mosExternalMetadata> structure and not inserted into the pre-defined body of the message.
7. You are not allowed to make representations of MOS Compatibility unless you have followed these guidelines.

Abstract

MOS is a more-than twenty year-old evolving protocol for communications between Newsroom Computer Systems (NCS) and Media Object Servers (MOS) such as Video Servers, Audio Servers, Still Stores, Character Generators, Automation Servers, and Prompters. The MOS Protocol development is supported through cooperative collaboration among equipment vendors, software vendors and end users.

Status of this document

This document reflects changes to the MOS protocol discussed during various NAB and IBC MOS meetings. It is referred to as MOS v4.0. New version details [are here](#).

How to use this document

The document contains bookmarks and hyperlinks. The Table of Contents and other areas contain underlined phrases. Depending on the viewer application used, clicking or double clicking on underlined links will take the viewer to the relevant portion of the document.

Please make special note of the Profiles section which provides context for the use of command messages which are later defined in detail.

Examples of each MOS message and data structure are included. These messages may be used for testing. Developers are encouraged to cut these messages from the document, change the value of ID tags as appropriate, and paste the modified messages into validation tools. Other than these example messages, validation tools are not provided by the MOS Group.

Media Object Server Protocol v4.0 Table of Contents

1. [Introduction](#)

MOS files

roCreate	roStoryDelete	roStoryInsert	roItemDelete
roStorySend	roItemInsert	roItemInsert	roStoryDelete
roStorySend	roItemInsert	roItemReplace	roStoryAppend
roStorySend	roItemInsert	roItemDelete	roStoryAppend
roStorySend	roItemReplace	roItemMove	roItemInsert
roStoryAppend	roStoryMove	roItemReplace	roItemInsert
roStoryMove	roStoryMove	roStoryMove	roStoryMove
roStoryMove	roStoryMove	roItemReplace	...
roItemInsert	roItemReplace	roStoryMove	roDelete

MOS files

```
<?xml version="1.0"?>
```

```
<mos>
```

```
  <mosID>RUNDOWNGATEWAY.W1.BBC.MOS</mosID>
```

```
  <ncsID>OPENMEDIA_NCS.W1.BBC.MOS</ncsID>
```

```
  <messageID>2812227</messageID>
```

```
  <roCreate>
```

```
    <roID>OPENMEDIA_NCS.W1.BBC.MOS;OM_5.604856</roID>
```

```
    <roSlug>0700 R4 TODAY Thu, 17.06.2021</roSlug>
```

```
    <roChannel>R4 News OnAir</roChannel>
```

```
    <roEdStart>2021-06-17T06:00:00</roEdStart>
```

```
    <roEdDur>00:00:00</roEdDur>
```

```
  </roTrigger/>
```

MOS files

```
<?xml version="1.0"?>
```

```
<mos>
```

```
  <mosID>RUNDOWNGATEWAY.W1.BBC.MOS</mosID>
```

```
  <ncsID>OPENMEDIA_NCS.W1.BBC.MOS</ncsID>
```

```
  <messageID>2812228</messageID>
```

```
  <roStorySend>
```

```
    <roID>OPENMEDIA_NCS.W1.BBC.MOS;OM_5.604856</roID>
```

```
    <storyID>OPENMEDIA_NCS.W1.BBC.MOS;OM_5.604856;OM_5.604885,5.604856.35</storyID>
```

```
    <storySlug>VCS PIN 4001</storySlug>
```

```
    <storyNum/>
```

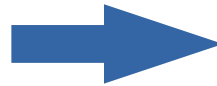
```
    <storyBody>
```

```
      <p/>
```

```
    </storyBody>
```

Process MOS files

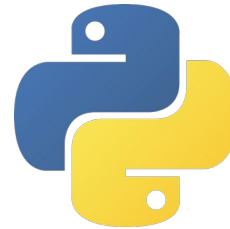
roCreate	roStoryDelete	roStoryInsert	roItemDelete
roStorySend	roItemInsert	roItemInsert	roStoryDelete
roStorySend	roItemInsert	roItemReplace	roStoryAppend
roStorySend	roItemInsert	roItemDelete	roStoryAppend
roStorySend	roItemReplace	roItemMove	roItemInsert
roStoryAppend	roStoryMove	roItemReplace	roItemInsert
roStoryMove	roStoryMove	roStoryMove	roStoryMove
roStoryMove	roStoryMove	roItemReplace	...
roItemInsert	roItemReplace	roStoryMove	roDelete



complete
running order

mosromgr

- MOS Running Order Manager
- Open source Python library for managing MOS running orders
- Python 3.6+
- Apache 2.0 licenced
- github.com/bbc/mosromgr
- mosromgr.readthedocs.io
- pypi.org/project/mosromgr
- bbc.co.uk/opensource/projects/mosromgr
- bbcnewslabs.co.uk/projects/mosromgr



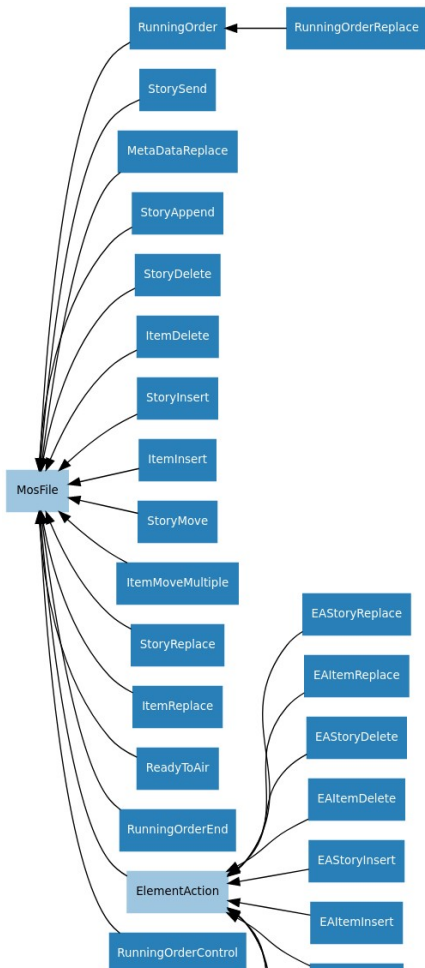
A screenshot of the PyPI (Python Package Index) page for the 'mosromgr' package. The page is blue and white. At the top, there's a search bar and navigation links for 'Help', 'Sponsors', 'Log in', and 'Register'. The main heading is 'mosromgr 0.9.0' with a green checkmark and 'Latest version' button. Below that is a 'pip install mosromgr' button and the release date 'Released: Jun 21, 2021'. The description reads 'Python library for managing MOS running orders'. There are sections for 'Navigation' (Project description, Release history, Download files), 'Project links' (Homepage, Issue Tracker, Source Code, Documentation), 'Statistics' (GitHub statistics: Stars: 6), and 'Project description' (Python library for managing MOS running orders. Pronounced mos-ro-manager. Includes the MOS PROTOCOL logo and a detailed description of the library's functionality and usage).



What can mosromgr do?

- Merge MOS files into a complete machine-readable running order
- Provide easy access to the contents of a MOS file or a complete running order
- Python library and CLI

MOS Type Classes



```
>>> from mosromgr.mostypes import *
```

```
>>> ro = RunningOrder.from_file('roCreate.mos.xml')
```

```
>>> ro
```

```
<RunningOrder 2812227>
```

```
>>> ss = StorySend.from_file('roStorySend.mos.xml')
```

```
>>> ss
```

```
<StorySend 2812227>
```

MOS Type Classes



```
>>> from mosromgr.mostypes import MosFile
>>> ro = MosFile.from_file('roCreate.mos.xml')
>>> ro
<RunningOrder 2812227>
>>> ss = MosFile.from_file('roStorySend.mos.xml')
>>> ss
<StorySend 2812227>
```

MOS Type Classes - construction

```
ro = RunningOrder.from_file('roCreate.mos.xml')
```

```
ro = RunningOrder.from_string(xml)
```

```
ro = RunningOrder.from_s3(  
    bucket_name='newsnight',  
    mos_file_key='20200101/roCreate.mos.xml'  
)
```

MOS Type Classes - construction

```
class MosFile:
    def __init__(self, xml):
        ...

    @classmethod
    def from_file(cls, mos_file_path):
        ...
        if cls == MosFile:
            return cls._classify(xml)
        return cls(xml)

    @classmethod
    def from_string(cls, mos_xml_string):
        ...
        if cls == MosFile:
            return cls._classify(xml)
        return cls(xml)
```


MOS Type Classes - property access

```
>>> from mosromgr.mostypes import RunningOrder
>>> ro = RunningOrder.from_file('123456-roCreate.mos.xml')
>>> ro.ro_slug
'22:45 NEWSNIGHT 54D CORE Thu, 08.04.2021'
>>> ro.message_id
123456
>>> ro.start_time
datetime.datetime(2021, 4, 8, 21, 46, 30)
>>> ro.duration
970.0
>>> len(ro.stories)
10
```

Escape hatch vs Ejector seat

```
>>> ro.xml
<Element 'mos' at 0x7f3236515c20>
>>> type(ro.xml)
xml.etree.ElementTree.Element
```



MOS Type Classes - property access

```
>>> from mosromgr.mostypes import RunningOrder
>>> ro = RunningOrder.from_file('123456-roCreate.mos.xml')
>>> story = ro.stories[0]
>>> story
<Story 5.604856.35>
>>> story.slug
'NEWS BULLETINS'
>>> story.duration
60.0
```

MOS Type Classes - property access

```
class RunningOrder:
    ...
    @property
    def stories(self):
        story_tags = self.base_tag.findall('story')
        return [
            Story(story_tag)
            for story_tag in story_tags
        ]
```

Escape hatch vs Ejector seat

```
>>> story.xml
<Element 'story' at 0x7f323496bdb0>
>>> type(story.xml)
xml.etree.ElementTree.Element
```



Merge methods

```
>>> from mosromgr.mostypes import *
>>> ro = RunningOrder.from_file('roCreate.mos.xml')
>>> si = StoryInsert.from_file('roStoryInsert.mos.xml')
>>> len(ro.stories)
10
>>> ro += si
>>> len(ro.stories)
11
```



Merge methods

```
class RunningOrder(MosFile):  
    def __add__(self, other):  
        return other.merge(self)
```


```
class StoryInsert(MosFile):  
    def merge(self, ro):  
        ...  
        return ro
```

mosromgr documentation

mosromgr
stable


Search docs

- Getting started
- Introduction
- How-to guide
- API - MOS Types
- API - MOS Elements
- API - MOS Collection
- API - Utilities
- API - Exceptions
- Command line interface
- Uses of mosromgr
- Changelog
- Development
- Feedback

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 Read the Docs v: stable ▾

» mosromgr

[Edit on GitHub](#)

mosromgr

Python library for managing MOS running orders. Pronounced *mos-ro-manager*.



The library provides functionality for classifying MOS file types, processing and inspecting MOS message files, as well as merging MOS files into a running order, and providing a "completed" programme including all additions and changes made between the first message (`roCreate`) and the last (`roDelete`).

This can be used as a library, using the utilities provided in the *mosromgr* module, and the command line command *Command line interface* can be used to process either a directory of MOS files, or a folder within an S3 bucket.

This library was developed by the [BBC News Labs](#) team.

Warning

Note that the library is currently in beta. The API and CLI are not yet stable and may change. Once the library reaches v1.0, it will be considered stable. Please consider giving [Feedback](#) to help stabilise the API.

Example Usage

Command line

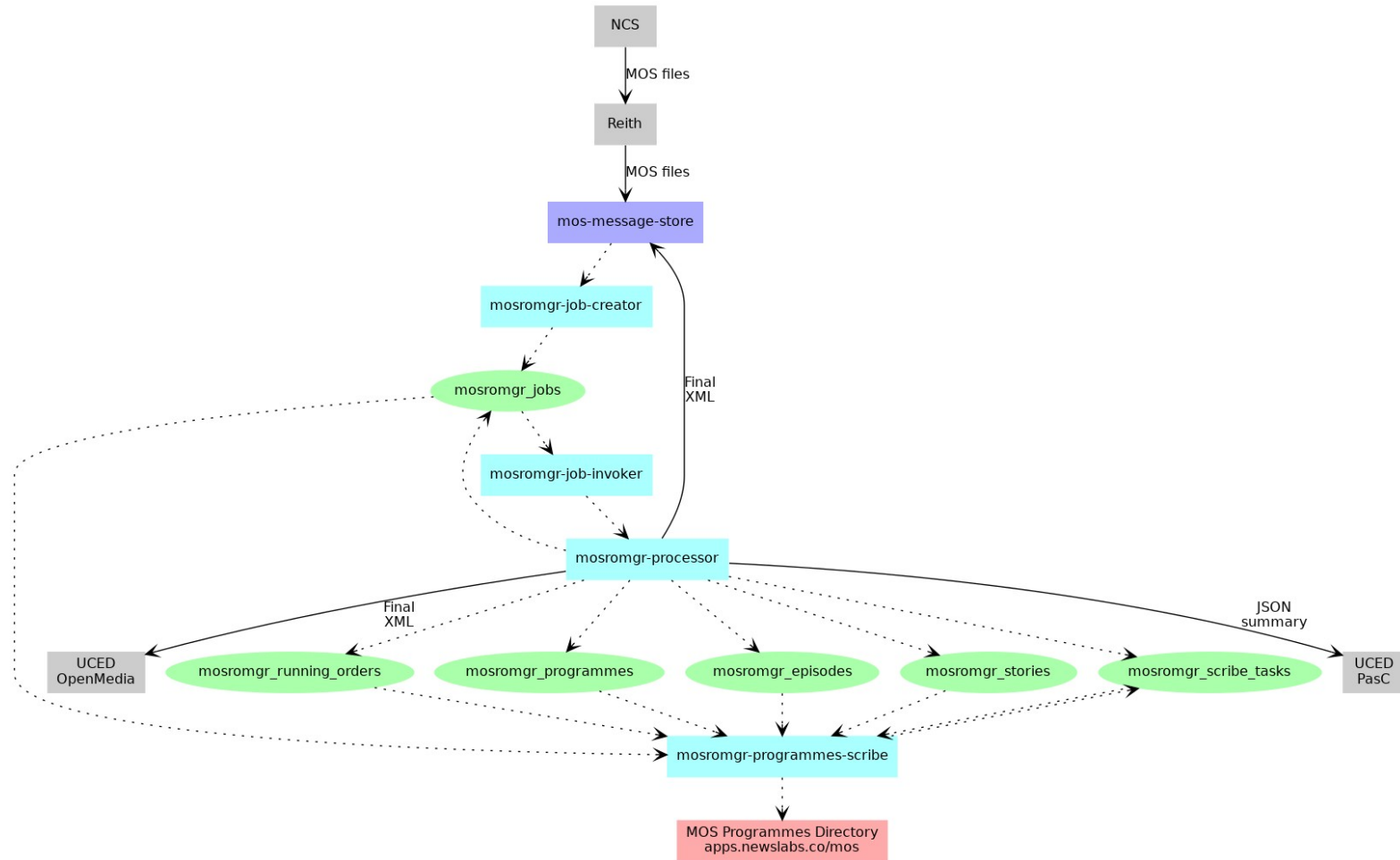


<https://diataxis.fr>

<https://mosromgr.readthedocs.io>

@ben_nuttall

How do we utilise mosromgr in News Labs?



AWS Lambda - Python 3.8

```
from mospipe.db import MosDatabase
from mospipe.processor import Processor
...

def lambda_handler(event, context):
    prefix = event['prefix']
    try:
        processor = Processor(bucket=BUCKET, prefix=prefix, live=True)
        processor()
    except Exception as e:
        db.jobs.update_status(prefix, status='failed')
        ...

if __name__ == '__main__':
    parser = argparse.ArgumentParser()
    ...
    processor = Processor(bucket=BUCKET, prefix=args.prefix, live=args.live)
    processor()
```

@ben_nuttall



mospipe library

```
class Processor:
    def __init__(self, *, bucket, prefix, live):
        ...

    def __call__(self):
        self.merge()
        ...
        self.publish()

    @property
    def bbc_info(self):
        ...

    @cached_property
    def files(self):
        ...
```

Status dashboard

























[Home](#) | [Status page](#)

Running order status page















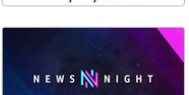
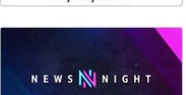




jobs	completed (3,777)	pending (50)	error (6)
RO ID	RO Slug	Files Brand Title Episode Title	First Seen Last Seen Warnings
OPENMEDIA_NCS.W1.BBC.MOS;OM_4.15278033	1100 NEWS CHANNEL + BBC Two Thu, 17.06.2021	423	2021-06-17 09:31 2021-06-17 11:15
OPENMEDIA_NCS.W1.BBC.MOS;OM_4.15276509	1130 NEWS CHANNEL + BBC Two Thu, 17.06.2021	184	2021-06-17 10:13 2021-06-17 11:14
OPENMEDIA_NCS.W1.BBC.MOS;OM_3.13951860	1100 WS The Newsroom Thu, 17.06.2021	261 The Newsroom 17/06/2021 10:06 GMT	2021-06-17 08:54 2021-06-17 10:54 ▶ 1 warnings
OPENMEDIA_NCS.BIRMINGHAM.BBC.MOS;OM_2.7486080	2230 TRAINING Louisa AM	29	2021-06-17 09:29 2021-06-17 10:34
OPENMEDIA_NCS.W1.BBC.MOS;OM_4.15276913	1030 NEWS CHANNEL, BBC Two, BBC World News Thu, 17.06.2021	375	2021-06-17 08:58 2021-06-17 10:15
OPENMEDIA_NCS.W1.BBC.MOS;OM_4.15277205	1000 NEWS CHANNEL, BBC Two, BBC World News Thu, 17.06.2021	403	2021-06-17 08:36 2021-06-17 10:15
OPENMEDIA_NCS.W1.BBC.MOS;OM_10.2100607	34D 1100B ARABIC TV NEWS Thu, 17.06.2021	101	2021-06-17 09:28 2021-06-17 10:10
OPENMEDIA_NCS.W1.BBC.MOS;OM_4.15276786	0930 NEWS CHANNEL + BBC Two Thu, 17.06.2021	334	2021-06-17 06:55 2021-06-17 09:33
OPENMEDIA_NCS.W1.BBC.MOS;OM_10.2100581	34D 1000B ARABIC TV NEWS Thu, 17.06.2021	148	2021-06-17 08:09 2021-06-17 09:29
OPENMEDIA_NCS.W1.BBC.MOS;OM_4.15277047	0900 NEWS CHANNEL + BBC Two Thu, 17.06.2021	660 BBC News BBC News at 9, 17/06/2021	2021-06-17 06:55 2021-06-17 09:20
OPENMEDIA_NCS.W1.BBC.MOS;OM_10.2104163	54D 0930 PERSIAN REPORTERS Thu, 17.06.2021	76	2021-06-17 08:34 2021-06-17 09:17
OPENMEDIA_NCS.BIRMINGHAM.BBC.MOS;OM_2.7486016	2230 TRAINING Giles AM	25	2021-06-17 08:36 2021-06-17 09:12
OPENMEDIA_NCS.W1.BBC.MOS;OM_4.15277318	0856 NEWS CHANNEL JUNCTION Studio E Thu, 17.06.2021	8	2021-06-17 06:55 2021-06-17 08:37
OPENMEDIA_NCS.BIRMINGHAM.BBC.MOS;OM_2.7481825	0857 MIDLANDS TODAY Thu, 17.06.2021	51	2021-06-17 07:45 2021-06-17 08:10
OPENMEDIA_NCS.W1.BBC.MOS;OM_10.2101229	34D 0900B ARABIC TV NEWS Thu, 17.06.2021	38	2021-06-17 07:49 2021-06-17 08:10
OPENMEDIA_NCS.W1.BBC.MOS;OM_10.2101382	34D 0930B MOBILE ARABIC TV NEWS Thu, 17.06.2021	25	2021-06-17 07:49 2021-06-17 08:09
OPENMEDIA_NCS.W1.BBC.MOS;OM_5.604888	0800 R4 TODAY Thu, 17.06.2021	202 Today 17/06/2021	2021-06-17 03:57 2021-06-17 08:04 ▶ 1 warnings
OPENMEDIA_NCS.W1.BBC.MOS;OM_10.2101351	34D 0830B ARABIC TV NEWS Thu, 17.06.2021	204	2021-06-17 07:21 2021-06-17 08:00
OPENMEDIA_NCS.SAI FORD BBC.MOS;OM_3.11272589	You and Yours Wed, 16.06.2021	90 You and Yours Paternity Leave Buffet Waste Social Ca...	2021-06-16 10:19 2021-06-17 07:53

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Newsnight

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Newsnight: 16/06/2021



The day's important national and international news stories. With Emily Maitlis.

Stories in this episode

1	PLAY	MENU	0:00:00	2021-06-16T21:45:00+01:00
2	PLAY	BIDEN/PUTIN	0:01:05	2021-06-16T21:46:05+01:00
3	PLAY	CUMMINGS	0:13:27	2021-06-16T21:58:27+01:00
4	PLAY	POLICE	0:15:38	2021-06-16T22:00:38+01:00
5	PLAY	ASYLUM	0:26:18	2021-06-16T22:11:18+01:00



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Newsnight: 16/06/2021

MENU

MENU-PRE TITLE TEASE

The US President meets the man he called a killer face to face. Does Russia Or America need this more?

MENU-POST TITLE "ALSO TONIGHT"

Biden and Putin discuss keeping critical infrastructure - like energy and water - off-limits to cyberattack. How does that deal work if you don't trust the guy who's said it?

ALSO TONIGHT

An exclusive investigation into sexual misconduct by police officers has found that there have been almost 1,500 allegations of wrongdoing across Britain in the last 5 years. So what happens when things go wrong?

AND

Aleem Maqbool is in Kent where the Council is facing a desperate effort to find the resources to shelter and house hundreds of unaccompanied child migrants.

BIDEN/PUTIN

BIDEN/PUTIN-INTRO

Good Evening, Last time a US president and a Russian president met it was in Helsinki. It was bizarre. And it was unforgettable. Donald Trump revealing to the press he had no reason to suspect Russia of election meddling and that he believed Vladimir Putin more readily than America's own security and intelligence agencies. So in some ways, the bar for Joe Biden was set pretty low. And this president was in no hurry to raise expectations. He warned that this was no meeting of friends. There is little trust between America and Russia right now. But it was a meeting of strategic minds. There are areas on which both can benefit from agreement. And so they talked -together - and to the press -separately. Joe Biden raised the case of jailed opposition leader Navalny - warning of terrible consequences if he died in prison. And mocked Putin for comparing that to the uprising on the Capital of January 6th. So who needs more out of this relationship. And Can they find one? Here's Mark Urban. (pkg) .

BIDEN/PUTIN-INTRO (2)

(pres).

And joining us now we have Nina Yanco-wicz, a cyber-security and disinformation specialist and a fellow at the Wilson center and we have Thomas Graham a former white house advisor on Russia and a senior director for Russia on the National Security Council.

<1. Nina Yancowicz who needs who more from this- Putin or Biden?

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SOUNDS

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Today

17/06/2021

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Headlines

2:00:00

3:02:59



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▶ Headlines	120:00
Headlines and news bulletins at eight o'clock on Thursday 17 June	
▶ Is help for business enough?	130:01
Is help for business enough?: Treasury Minister Jesse Norman on how business will be affected by 21 June delay	
▶ Influencer rule-breakers to be named	141:00
The ASA is launching a website page naming online influencers who break advertising rules	
▶ Sport news	145:32
Sport news with Karthi Gnanasegaram	
▶ News summary	151:20
Weather and news summary at half past eight	
▶ UK-Australia trade deal	152:39
The government publishes negotiation details for a UK-Australia free trade deal	
▶ Lockdown Tory rebels	155:35
Over 50 Conservatives voted against England's four week extension of Covid restrictions	
▶ Older people impacted by economy	160:02
IFS report shows Covid's impact on the economy could affect the eldest more than the young	
▶ Tigray humanitarian crisis	166:35
Tigray, Ethiopia, faces a humanitarian crisis following seven months of war	
▶ Children's social care 'under significant strain'	169:53
A reports finds children's social care in England is failing to provide support	
▶ Picture books	174:40
Author Julia Donaldson shares her secret on how to write for the very youngest readers	

Slicer

BBC

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Dashboard

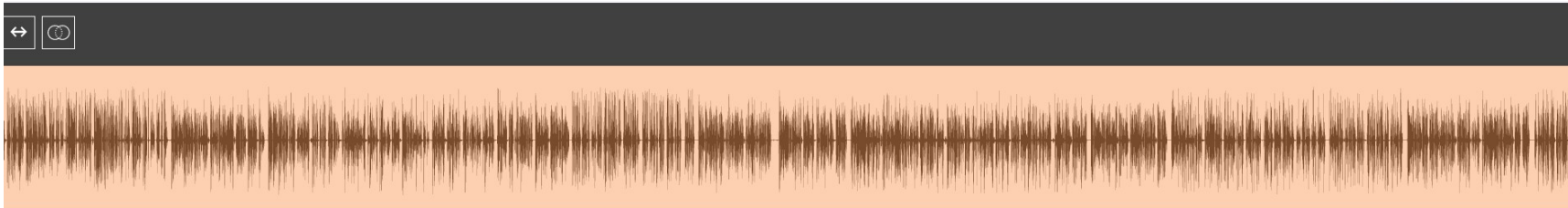
bbc.co.uk/programmes/m000x0ty

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Headlines
00:00:00:00

00:00:00:00 / 01:03:00:01

IN 00:00:00:00 OUT 00:10:01:23

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Headlines
Is help for business enough? Influencer rule-breakers to be named Sport news

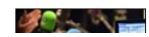
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Title

Headlines

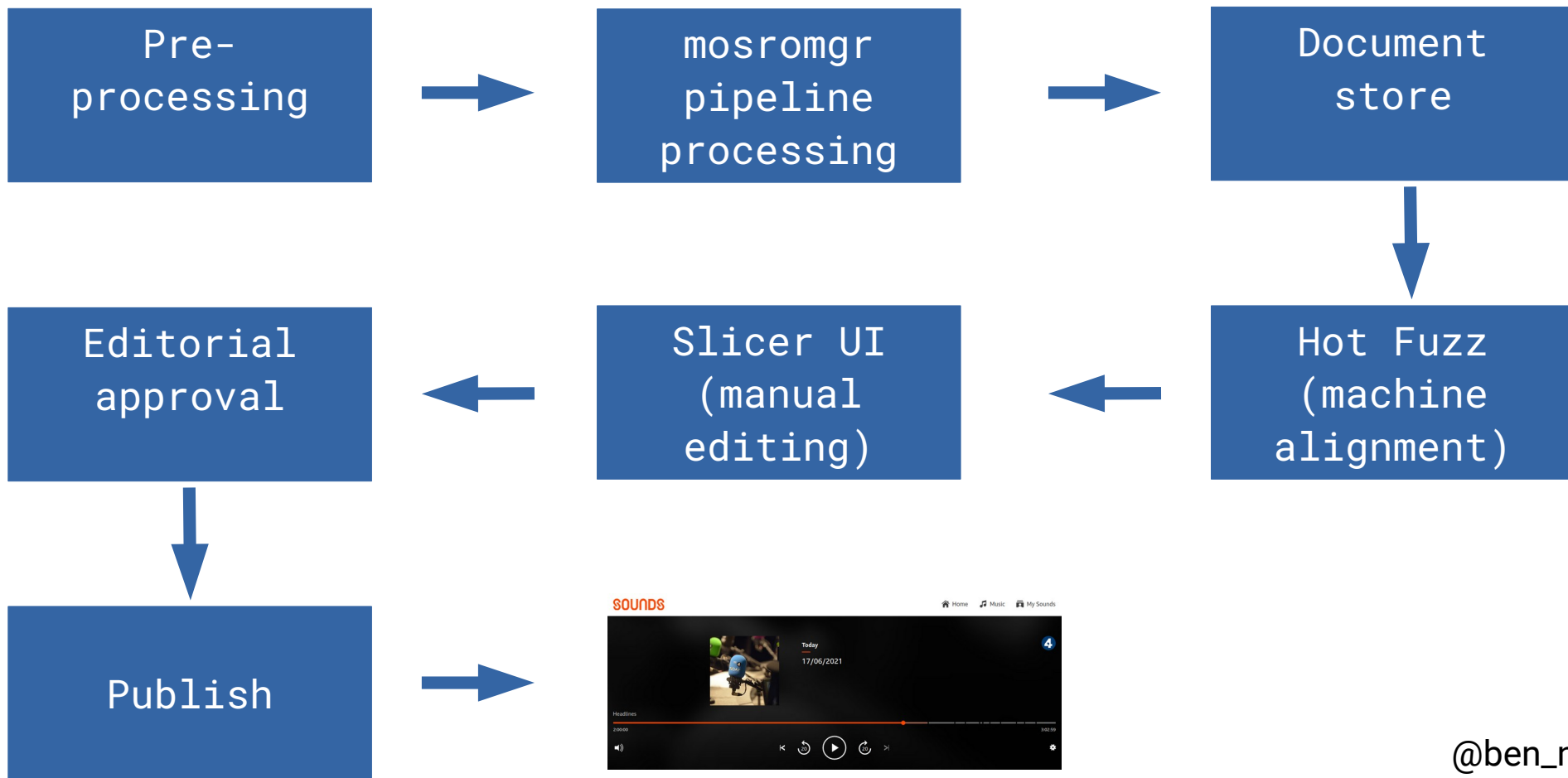
Synopsis

Headlines and news bulletins at eight o'clock on Thursday 17 June



Segment ID 1719435

Slicer





What next?

- Gather feedback from other broadcasters to ensure the library is compatible with other systems and workflows
- Roll out automated chapterisation for other programmes, including TV shows like Newsnight
- Provide accessible programme data from running orders as a service within the BBC
- More OBM projects demonstrating opportunities e.g. personalisation



BBC
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Innovation in the newsroom

MOS Running Order Manager and its application



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