想起近日开发过程中用到了在分页中播放音频的需求，便于大家以后遇到这种东西，留此文档作为札记。

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# 前言

E8系统在存储音频时（主要来源EMobile语音文件），并没有生成音频文件作为保存，则是用InputStream或者衍生类（最常见的是FileInputStream）进行读取到文件后用ByteArrayOutputStream转换为byte[]，然后用sun.misc.BASE64Encoder()进行转码后生成的String存储在数据库的Clob字段。

一般的音频和图片（指较小的），这样存储可以提高效率，便于提取和使用。

# 初版

我设计最初的方案的时候，是想根据各种媒体数据以 base64 编码方式直接嵌入网页中的写法。好处是方便，但是这种写法在chrome和FF等非IE浏览器是可以将特定格式的音频和图片进行转码的，后边我会详细整理是哪些特定格式，还需注意360，360极速，QQ浏览器等因对下载组件做了包装，所以哪怕你用chrome的内核，执行结果还是和chrome浏览器有些出入。若理想的客户环境下，是可以采用的。

媒体数据 base64 编码方式直接嵌入网页中的写法：

Ps：这种方式可以配合锚点，url，以及js函数使用，和HTML完美兼容，

若文件格式不存在以下列表，或因浏览器本身版本，插件，内核等问题无法执行预览等操作，会默认进行base64解码转文件，提示下载；

例如：

图片png格式（支持预览，可查看）

data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAABAAAAAQAQMAAAAlPW0iAAAABlBMVEUAAAD///+l2Z/dAAAAM0lEQVR4nGP4/5/h/1+G/58ZDrAz3D/McH8yw83NDDeNGe4Ug9C9zwz3gVLMDA/A6P9/AFGGFyjOXZtQAAAAAElFTkSuQmCC

音频amr格式（浏览器内嵌的audio不支持，会提示下载）

data:audio/amr;base64,IyFBTVIKLE8QzAw+KnGIQo3uI8XJ6+hhCKggLE6YwAeQm7vRNJZZ/k

//amr并不在以下列表

所有格式写法说明

其他格式写法说明

123 application/vnd.lotus-1-2-3

3gp video/3gpp

aab application/x-authoware-bin

aam application/x-authoware-map

aas application/x-authoware-seg

ai application/postscript

aif audio/x-aiff

aifc audio/x-aiff

aiff audio/x-aiff

als audio/X-Alpha5

amc application/x-mpeg

ani application/octet-stream

asc text/plain

asd application/astound

asf video/x-ms-asf

asn application/astound

asp application/x-asap

asx video/x-ms-asf

au audio/basic

avb application/octet-stream

avi video/x-msvideo

awb audio/amr-wb

bcpio application/x-bcpio

bin application/octet-stream

bld application/bld

bld2 application/bld2

bmp application/x-MS-bmp

bpk application/octet-stream

bz2 application/x-bzip2

cal image/x-cals

ccn application/x-cnc

cco application/x-cocoa

cdf application/x-netcdf

cgi magnus-internal/cgi

chat application/x-chat

class application/octet-stream

clp application/x-msclip

cmx application/x-cmx

co application/x-cult3d-object

cod image/cis-cod

cpio application/x-cpio

cpt application/mac-compactpro

crd application/x-mscardfile

csh application/x-csh

csm chemical/x-csml

csml chemical/x-csml

css text/css

cur application/octet-stream

dcm x-lml/x-evm

dcr application/x-director

dcx image/x-dcx

dhtml text/html

dir application/x-director

dll application/octet-stream

dmg application/octet-stream

dms application/octet-stream

doc application/msword

dot application/x-dot

dvi application/x-dvi

dwf drawing/x-dwf

dwg application/x-autocad

dxf application/x-autocad

dxr application/x-director

ebk application/x-expandedbook

emb chemical/x-embl-dl-nucleotide

embl chemical/x-embl-dl-nucleotide

eps application/postscript

eri image/x-eri

es audio/echospeech

esl audio/echospeech

etc application/x-earthtime

etx text/x-setext

evm x-lml/x-evm

evy application/x-envoy

exe application/octet-stream

fh4 image/x-freehand

fh5 image/x-freehand

fhc image/x-freehand

fif image/fif

fm application/x-maker

fpx image/x-fpx

fvi video/isivideo

gau chemical/x-gaussian-input

gca application/x-gca-compressed

gdb x-lml/x-gdb

gif image/gif

gps application/x-gps

gtar application/x-gtar

gz application/x-gzip

hdf application/x-hdf

hdm text/x-hdml

hdml text/x-hdml

hlp application/winhlp

hqx application/mac-binhex40

htm text/html

html text/html

hts text/html

ice x-conference/x-cooltalk

ico application/octet-stream

ief image/ief

ifm image/gif

ifs image/ifs

imy audio/melody

ins application/x-NET-Install

ips application/x-ipscript

ipx application/x-ipix

it audio/x-mod

itz audio/x-mod

ivr i-world/i-vrml

j2k image/j2k

jad text/vnd.sun.j2me.app-descriptor

jam application/x-jam

jar application/java-archive

jnlp application/x-java-jnlp-file

jpe image/jpeg

jpeg image/jpeg

jpg image/jpeg

jpz image/jpeg

js application/x-javascript

jwc application/jwc

kjx application/x-kjx

lak x-lml/x-lak

latex application/x-latex

lcc application/fastman

lcl application/x-digitalloca

lcr application/x-digitalloca

lgh application/lgh

lha application/octet-stream

lml x-lml/x-lml

lmlpack x-lml/x-lmlpack

lsf video/x-ms-asf

lsx video/x-ms-asf

lzh application/x-lzh

m13 application/x-msmediaview

m14 application/x-msmediaview

m15 audio/x-mod

m3u audio/x-mpegurl

m3url audio/x-mpegurl

ma1 audio/ma1

ma2 audio/ma2

ma3 audio/ma3

ma5 audio/ma5

man application/x-troff-man

map magnus-internal/imagemap

mbd application/mbedlet

mct application/x-mascot

mdb application/x-msaccess

mdz audio/x-mod

me application/x-troff-me

mel text/x-vmel

mi application/x-mif

mid audio/midi

midi audio/midi

mif application/x-mif

mil image/x-cals

mio audio/x-mio

mmf application/x-skt-lbs

mng video/x-mng

mny application/x-msmoney

moc application/x-mocha

mocha application/x-mocha

mod audio/x-mod

mof application/x-yumekara

mol chemical/x-mdl-molfile

mop chemical/x-mopac-input

mov video/quicktime

movie video/x-sgi-movie

mp2 audio/x-mpeg

mp3 audio/x-mpeg

mp4 video/mp4

mpc application/vnd.mpohun.certificate

mpe video/mpeg

mpeg video/mpeg

mpg video/mpeg

mpg4 video/mp4

mpga audio/mpeg

mpn application/vnd.mophun.application

mpp application/vnd.ms-project

mps application/x-mapserver

mrl text/x-mrml

mrm application/x-mrm

ms application/x-troff-ms

mts application/metastream

mtx application/metastream

mtz application/metastream

mzv application/metastream

nar application/zip

nbmp image/nbmp

nc application/x-netcdf

ndb x-lml/x-ndb

ndwn application/ndwn

nif application/x-nif

nmz application/x-scream

nokia-op-logo image/vnd.nok-oplogo-color

npx application/x-netfpx

nsnd audio/nsnd

nva application/x-neva1

oda application/oda

oom application/x-AtlasMate-Plugin

pac audio/x-pac

pae audio/x-epac

pan application/x-pan

pbm image/x-portable-bitmap

pcx image/x-pcx

pda image/x-pda

pdb chemical/x-pdb

pdf application/pdf

pfr application/font-tdpfr

pgm image/x-portable-graymap

pict image/x-pict

pm application/x-perl

pmd application/x-pmd

png image/png

pnm image/x-portable-anymap

pnz image/png

pot application/vnd.ms-powerpoint

ppm image/x-portable-pixmap

pps application/vnd.ms-powerpoint

ppt application/vnd.ms-powerpoint

pqf application/x-cprplayer

pqi application/cprplayer

prc application/x-prc

proxy application/x-ns-proxy-autoconfig

ps application/postscript

ptlk application/listenup

pub application/x-mspublisher

pvx video/x-pv-pvx

qcp audio/vnd.qcelp

qt video/quicktime

qti image/x-quicktime

qtif image/x-quicktime

r3t text/vnd.rn-realtext3d

ra audio/x-pn-realaudio

ram audio/x-pn-realaudio

rar application/x-rar-compressed

ras image/x-cmu-raster

rdf application/rdf+xml

rf image/vnd.rn-realflash

rgb image/x-rgb

rlf application/x-richlink

rm audio/x-pn-realaudio

rmf audio/x-rmf

rmm audio/x-pn-realaudio

rmvb audio/x-pn-realaudio

rnx application/vnd.rn-realplayer

roff application/x-troff

rp image/vnd.rn-realpix

rpm audio/x-pn-realaudio-plugin

rt text/vnd.rn-realtext

rte x-lml/x-gps

rtf application/rtf

rtg application/metastream

rtx text/richtext

rv video/vnd.rn-realvideo

rwc application/x-rogerwilco

s3m audio/x-mod

s3z audio/x-mod

sca application/x-supercard

scd application/x-msschedule

sdf application/e-score

sea application/x-stuffit

sgm text/x-sgml

sgml text/x-sgml

sh application/x-sh

shar application/x-shar

shtml magnus-internal/parsed-html

shw application/presentations

si6 image/si6

si7 image/vnd.stiwap.sis

si9 image/vnd.lgtwap.sis

sis application/vnd.symbian.install

sit application/x-stuffit

skd application/x-Koan

skm application/x-Koan

skp application/x-Koan

skt application/x-Koan

slc application/x-salsa

smd audio/x-smd

smi application/smil

smil application/smil

smp application/studiom

smz audio/x-smd

snd audio/basic

spc text/x-speech

spl application/futuresplash

spr application/x-sprite

sprite application/x-sprite

spt application/x-spt

src application/x-wais-source

stk application/hyperstudio

stm audio/x-mod

sv4cpio application/x-sv4cpio

sv4crc application/x-sv4crc

svf image/vnd

svg image/svg-xml

svh image/svh

svr x-world/x-svr

swf application/x-shockwave-flash

swfl application/x-shockwave-flash

t application/x-troff

tad application/octet-stream

talk text/x-speech

tar application/x-tar

taz application/x-tar

tbp application/x-timbuktu

tbt application/x-timbuktu

tcl application/x-tcl

tex application/x-tex

texi application/x-texinfo

texinfo application/x-texinfo

tgz application/x-tar

thm application/vnd.eri.thm

tif image/tiff

tiff image/tiff

tki application/x-tkined

tkined application/x-tkined

toc application/toc

toy image/toy

tr application/x-troff

trk x-lml/x-gps

trm application/x-msterminal

tsi audio/tsplayer

tsp application/dsptype

tsv text/tab-separated-values

tsv text/tab-separated-values

ttf application/octet-stream

ttz application/t-time

txt text/plain

ult audio/x-mod

ustar application/x-ustar

uu application/x-uuencode

uue application/x-uuencode

vcd application/x-cdlink

vcf text/x-vcard

vdo video/vdo

vib audio/vib

viv video/vivo

vivo video/vivo

vmd application/vocaltec-media-desc

vmf application/vocaltec-media-file

vmi application/x-dreamcast-vms-info

vms application/x-dreamcast-vms

vox audio/voxware

vqe audio/x-twinvq-plugin

vqf audio/x-twinvq

vql audio/x-twinvq

vre x-world/x-vream

vrml x-world/x-vrml

vrt x-world/x-vrt

vrw x-world/x-vream

vts workbook/formulaone

wav audio/x-wav

wax audio/x-ms-wax

wbmp image/vnd.wap.wbmp

web application/vnd.xara

wi image/wavelet

wis application/x-InstallShield

wm video/x-ms-wm

wma audio/x-ms-wma

wmd application/x-ms-wmd

wmf application/x-msmetafile

wml text/vnd.wap.wml

wmlc application/vnd.wap.wmlc

wmls text/vnd.wap.wmlscript

wmlsc application/vnd.wap.wmlscriptc

wmlscript text/vnd.wap.wmlscript

wmv audio/x-ms-wmv

wmx video/x-ms-wmx

wmz application/x-ms-wmz

wpng image/x-up-wpng

wpt x-lml/x-gps

wri application/x-mswrite

wrl x-world/x-vrml

wrz x-world/x-vrml

ws text/vnd.wap.wmlscript

wsc application/vnd.wap.wmlscriptc

wv video/wavelet

wvx video/x-ms-wvx

wxl application/x-wxl

x-gzip application/x-gzip

xar application/vnd.xara

xbm image/x-xbitmap

xdm application/x-xdma

xdma application/x-xdma

xdw application/vnd.fujixerox.docuworks

xht application/xhtml+xml

xhtm application/xhtml+xml

xhtml application/xhtml+xml

xla application/vnd.ms-excel

xlc application/vnd.ms-excel

xll application/x-excel

xlm application/vnd.ms-excel

xls application/vnd.ms-excel

xlt application/vnd.ms-excel

xlw application/vnd.ms-excel

xm audio/x-mod

xml text/xml

xmz audio/x-mod

xpi application/x-xpinstall

xpm image/x-xpixmap

xsit text/xml

xsl text/xml

xul text/xul

xwd image/x-xwindowdump

xyz chemical/x-pdb

yz1 application/x-yz1

z application/x-compress

zac application/x-zaurus-zac

zip application/zip

# 再版

因第一种写法存在局限性，所以为了处理跨浏览器的问题，以及更好的预览体验又进行了开发。

Ps:对js兼容性有兴趣的同事，可以自行学习TypeScript（主要是将JavaScript变成强类型，然后在编译期去掉类型和特有语法，生成纯粹的 JavaScript 代码。由于最终在浏览器中运行的仍然是 JavaScript，所以 TypeScript 并不依赖于浏览器的支持，也并不会带来兼容性问题，好了说多了我也不懂。。。）。

原理就不多说了，每个人的理解不一样，主要讲怎么做

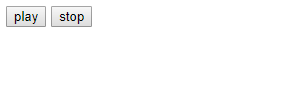
JS 依赖：



Voice.js做了合并，如此版本符合您的需求，可不用理会其他三个JS

如何调用





如此可以实现播放和暂停功能。

因这种方式虽然解决了跨浏览器问题，但是还是会有不理想的情况发生，原因是IE的内核是Trident，对环境和版本还是会有或多或少的影响。而FF、Chrome等支持<Audio>的可以使用 github 上 AMR 开源库进行播放。

因开发音频播放器的成本是很高的，也没必要为了几人天累坏自己，毕竟生有涯，知无涯，你们要爱自己，信自己。

最好的解决IE问题的办法是用OCX控件的方式最为稳妥。

在服务器上部署OCX后，访问过程是这样的

例如，

1. 获取数据后在HTML里进行传递
2. 最后经过你的逻辑处理后来到OBJECT标签里边，这个标签里大概会包含这些东西

classid="clsid:0B604FF9-8559-4A46-9AC4-9FBCA4884C4B"

codebase="/weavernorth/ys95-ocx/EXE/ys95ocxProj1.ocx#version=1,0,0,0"

width=350

height=250

align=center

hspace=0

vspace=0

1. 通过codebase找到服务器上的OCX，调用执行（有需要的情况需要在PC端存放.exe的可执行文件）。

期间的参数传递各有不同，就实际情况而言。