

# Constructing Regional Information Transmission Infrastructure using Area Broadcasting

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## Research Topics

- Identification and grasp of actual viewing area of area broadcasting
- Automatic generation of regional information contents

## Research Seeds

### ● Identification and grasp of the actual viewing area of area broadcasting

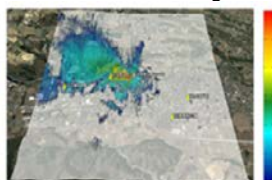
Area broadcasting can be viewed on a home TV receiver. However, the receiving antenna of each household is directed to an existing broadcasting station. It is not necessarily pointed in the direction of the newly constructed area broadcasting station. Because the radio waves of the area broadcasting are weak, the influence of the signal level reduction caused by the difference in the receiving antenna direction is great. This research is aimed at establishing a method enabling identification and understanding of realistic viewable area, based on electric field strength distribution in radio wave propagation simulation and field strength measurement data.

### ● Automatic generation of regional information contents

Area broadcasting TV is beneficial as a local information transmission medium because it can be viewed simply by pressing a channel button on the remote control with a home TV receiver. However, the production of broadcast contents takes much time and effort to gather broadcast materials and perform video editing work. Broadcast audiences want to obtain regional information in a timely manner. To realize that goal, it is necessary to devise a method of generating new broadcast contents. This research is based on the fundamental concept of placing information material on the PC screen and using the screen as broadcast contents. Multimedia processing is applied to various information materials acquired from the network. Furthermore, it sequentially maps them to frames of the previously designed broadcast screen image. As a result, it is possible to generate broadcast content that changes over time.



Estimation of viewing area with antenna direction.



Generating broadcast contents by Web scraping and mashup.

## Related Technology

- Terrestrial digital broadcasting
- Radio wave propagation simulation
- Web scraping and mashup