

Παραδείγματα εφαρμογής σε αστικές περιοχές

Εφαρμογές χρήσης 3D ψηφιακών αντιγράφων
Αναζήτηση & Ανάκτηση 3D Πληροφορίας

Εφαρμογές χρήσης 3D Ψηφιακών αντιγράφων - Ανάκτηση

Αξιοποίηση της 3D πληροφορίας

Πλέον γνωστός μηχανισμός ανάκτησης ψηφιακής πληροφορίας
Αναζήτηση-Ανάκτηση Βάσει Κειμένου (Μηχανές αναζήτησης – Google)

Βασίζεται στην επισημείωση (annotation)
Πραγματοποιείται με χρήση ειδικών μορφών δεδομένων
Ονομάζονται Μεταδεδομένα → Δεδομένα για τα δεδομένα

Χρήση λέξεων-κλειδιά για τον χαρακτηρισμό πληροφορίας

Google Scholar search results for "3D scene path finding". The search shows approximately 60,100 results in 0.06 seconds. The top results include:

- Path finding for human motion in virtual environments** by S. Bandi and D. Thalmann (2000, Elsevier). Abstract: "Each slice is drawn on the screen using orthographic projection onto a window of resolution equal to the required resolution of the 3D grid in Z-X plane. ... The only requirement of separating path finding algorithm from scene discretization is the availability of a drawing ...". Cited by 45.
- Stereo by intra-and inter-scanline search using dynamic programming** by Y. Ohta and T. Kanade (1985, IEEE). Abstract: "... of finding a matching path on a two-dimensional (2D) search plane whose axes are the right and left scan-lines. Vertically connected edges in the images provide consistency constraints across the 2D search planes. Inter-scanline search in a three-dimensional (3D) search ...". Cited by 1217.
- Computational strategies for object recognition** by P. Suetens, P. Fua, and A.J. Hanson (1992, ACM). Abstract: "... THE OBJECT RECOGNITION TASK Definitions Object recognition is the task of finding and labeling ... shape, texture, and context knowledge about the occurrence of such objects in a scene ...". Cited by 299.

Google Images search results for "ancient pottery". The search shows various images of ancient pottery vessels, including Greek, Egyptian, and Chinese styles. The results are categorized by region: Indian, Greek, Egyptian, and Chinese. The images show a variety of shapes and designs, including vases, amphorae, and decorated bowls.

Εφαρμογές χρήσης 3D Ψηφιακών αντιγράφων - Ανάκτηση

Δημιουργία αποθετηρίων με δυνατότητες αυτοματοποιημένης κατηγοριοποίησης / ανάκτησης / διαδραστικής προβολής

Παράδειγμα: 3DSSE

3DSSE
3D Scene Search Engine

church

Exploring 3D scenes using keywords : About 6 results (0.72705 mseconds)

The Old Town Of Xanthi See it in 3D →

Country: Greece County: Xanthi
Era: 19th Century - 19th Century

Epirotes and Western Macedonians craftsmen built with artistry the structure of Old Town, following the patterns of urban centers of the Ottoman empire. Exquisite architecture, belle époque, influence from Italian Renaissance, German Romanticism and Greek Neoclassicism. They are defused all over.

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Bank Of Charity More about it → See it in 3D → See it in on map → What is close to it →

It is located at Metropolis square (old town of Xanthi). It was used as headquarters of the Greek consulate during the Ottoman occupation. It has also being used as the residence of the priest of the neighbouring Holy Temple of Timios Prodromos. It was donated to the Metropolis Church by the Fotiades family.

In Summary: A two storey squared and minimal building.
Construction: 1900 Functionality: Charitable institution Num. of Storeys: 2

about it → See it in 3D → See it in on map → What is close to it →

tor and patron saint of Xanthi. It is a three aisle basilica with a nave, In a previous phase it should have been triune. The central aisle is h aisle to the Annunciation and the south to St. George the martyr "from

urch Num. of Storeys: 2

See it in on map → What is close to it →

are in the old city of Xanthi, in the northwest of the Metropolitan Church built in 1897 with funds from the monasteries of Xanthi and contributions iser was conducted in order to make repairs to the building, to which

idence Num. of Storeys: 2

Belfry Of Timios Prodromos Church More about it → See it in 3D → See it in on map → What is close to it →

The belfry is located at the southwest side of the Metropolitan Church of St. John the Baptist, in the old city of Xanthi. It has three storeys, five bells it is built of reinforced mixed concrete and shows classic and new-Byzantine characteristics. The current belfry replaced an older, located at the northwest of the temple. In a postcard of 1920 can be seen the shape of the old belfry.

In Summary: It was built in the 19th century
Construction: 1924 Functionality: Religious Num. of Storeys: 3



a. View of Kougioumtzoglou mansion, Old city of Xanthi, Greece



b. View of Mehmet Ali's house, Old city of Kavala, Greece



c. View of Saint Barbara's springs, Drama, Greece

Εφαρμογές χρήσης 3D Ψηφιακών αντιγράφων - Ανάκτηση

Βελτιωμένη πρόσβαση σε σύνθετες 3D σκηνές και στο περιεχόμενο

Στο πλαίσιο παροχής υπηρεσιών με στόχο την

Αποτελεσματική πρόσβαση σε 3D σκηνές

Μια πιθανή λύση μπορεί να προκύψει από τον συνδυασμό

- i. Λογισμικό επισημείωσης 3D σκηνών και δημιουργία μεταδεδομένων (e.g. The EPOCH – Viewer)
- ii. Μια τυπική μηχανή – αναζήτησης με λέξεις κλειδιά

Ο συγκεκριμένος συνδυασμός δύναται να **απαλλάσσει τον τελικό χρήστη από**

- Χρονοβόρα διαδικασία χειροκίνητης εξερεύνησης για τον εντοπισμό σημείων ενδιαφέροντος
- Εισάγει ένα πιο **αποτελεσματικό και φιλικό προς τον τελικό χρήστη τρόπο εξερεύνησης 3D σύνθετων ή πολύπλοκων σκηνών**

Εφαρμογές χρήσης 3D Ψηφιακών αντιγράφων - Ανάκτηση

Ένα παράδειγμα εφαρμογής

- Μια συλλογή από 3D αναπαραστάσεις αστικών περιοχών με πλούσια πολιτιστικά, ιστορικά, αρχιτεκτονικά χαρακτηριστικά στην βόρεια Ελλάδα

Τρόπος Προσέγγισης

- 3D ανακατασκευές με χαρακτηριστικά φιλικά με το Διαδίκτυο (X3D, low polygon)
- Επισημείωση της κάθε 3D σκηνής
- Εντοπισμός οπτικής γωνίας όπου εμφανίζεται η πρόσοψη του εκάστοτε κτιρίου - POI
- Καταγραφή αρχιτεκτονικών και άλλων ιστορικών στοιχείων για κάθε κτίριο



Εφαρμογές χρήσης 3D Ψηφιακών αντιγράφων - Ανάκτηση

Walk-through Βίντεο από 3D αναπαραστάσεις στις πόλεις Καβαλά, Δράμα, Ξάνθη



Εφαρμογές χρήσης 3D Ψηφιακών αντιγράφων - Ανάκτηση

Walk-through Βίντεο από 3D αναπαραστάσεις στις πόλεις Καβαλά, Δράμα, Ξάνθη



Εφαρμογές χρήσης 3D Ψηφιακών αντιγράφων - Ανάκτηση

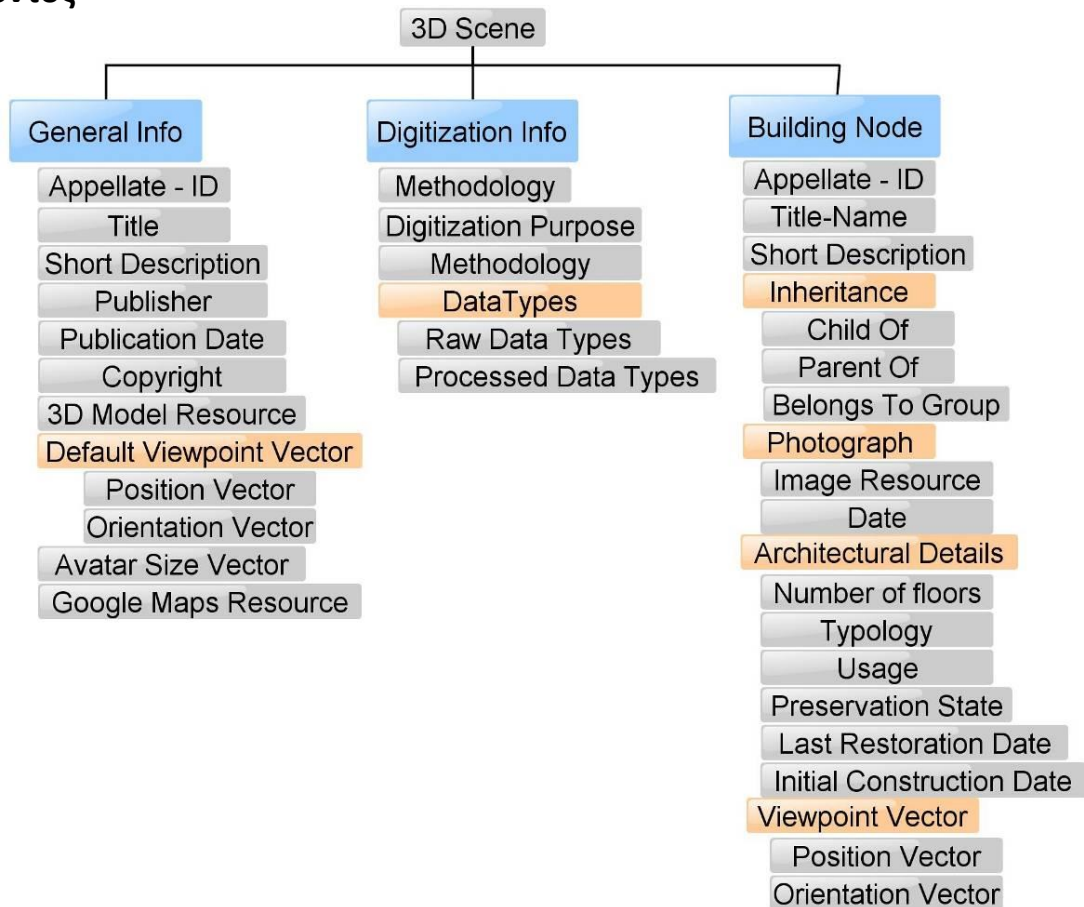
Walk-through Βίντεο από 3D αναπαραστάσεις στις Βυζαντινών Εκκλησιών στη Μάνη



Εφαρμογές χρήσης 3D Ψηφιακών αντιγράφων - Ανάκτηση

Τρόπος Προσέγγισης συνέχεια...

Απλοποιημένο σχήμα μεταδεδομένων σε μορφή XML → Βασισμένο στην κειμενική πληροφορία που υπήρχε για κάθε σημείο ενδιαφέροντος



Εφαρμογές χρήσης 3D Ψηφιακών αντιγράφων - Ανάκτηση

Επερωτήσεις προς τη μηχανή αναζήτησης

Ο χρήστης παρέχει επερωτήσεις με βάσει κάποιες λέξεις κλειδιά :

Το περιεχόμενο της επερωτήσης μπορεί να αφορά σε :

Αρχιτεκτονικά χαρακτηριστικά, στοιχεία, λεπτομέρειες

Πλήθος ορόφων

Χρήσης

Παρούσα Κατάσταση κτιρίου

Χρονολογία κατασκευής

Χρονολογία πιθανής αποκατάστασης

Οποιοσδήποτε λέξεις κλειδιά που μπορούν να ταυτιστούν μέσα στα κείμενα όπου υπάρχει η ιστορική περιγραφή του εκάστοτε κτιρίου

Στην πραγματικότητα οτιδήποτε υπάρχει μέσα στα μεταδεδομένα

Τοπολογικές επερωτήσεις (Τι υπάρχει εδώ κοντά;)



:: Exploring 3D scenes using keywords ::



Εφαρμογές χρήσης 3D Ψηφιακών αντιγράφων - Ανάκτηση

Η απάντηση στην επερώτηση του χρήστη περιλαμβάνει :

Χάρτης που καλύπτει η 3D σκηνή καθώς και σύντομη περιγραφή της

Μικρογραφία που προβάλλεται η πρόσοψη του κτιρίου

Σύντομη περιγραφή του κτιρίου

Σύνδεσμος για την άμεση εικονική μεταφορά του χρήστη μπροστά από το κτίριο μέσα στην 3D σκηνή



<http://goo.g/0ET81G>

Εφαρμογές χρήσης 3D Ψηφιακών αντιγράφων - Ανάκτηση

Παρουσίαση της μηχανής αναζήτησης 3DSSE

3dom
3DSSE

Exploring 3D scenes using keywords: About 23 results (0.284261 seconds)

Searching for null. CHEAT mode ENABLED (-)

The Old Town Of Xanthi See it in 3D →

Country: Greece County: Xanthi
Era: 19th Century - 19th Century
Cultural and Educational Technology Institute/R.C. 'Athens'

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Cultural and Educational Technology Institute/R.C. 'Athens' © 2011

Kougioumtzoglou - Kalouidi Mansion More about it → See it in 3D → See it in on map → What is close to it →
The mansion of Kougioumtzoglou - Kalouidi is located in the old city of Xanthi, in a short distance from the Metropolis Square. It was constructed as a private residence of Vassilios Kougioumtzoglou, a wealthy tobacco merchant of the era. The Kougioumtzoglou family also owned the two buildings right next to this mansion, on Andria Street 5-7, which house the Folklore Museum of the city, as well three similar buildings in Philippoupolis in Bulgaria, one of which houses the Ethnological Museum of In Summary: 19th century building with Centre-European architecture influences
Construction: 1877 Functionality: Municipal administration Typology: Arcade building Num. of Storeys: 2

Municipal Art Gallery Of Xanthi More about it → See it in 3D → See it in on map → What is close to it →
The building of the Municipal Gallery of Xanthi is located in the old city of Xanthi, in a short distance from the Metropolis Square. It is one of the oldest buildings in the city and it was built as a family residence of the Kalavras family. Originally it was built as one house, but later its owner divided the interior into two parts and opened a second independent entrance. Typologically it belongs to the traditional folk architecture of Western Macedonia and Epirus. The construction of the buildings of this type is attributed to In Summary: 19th century building with Macedonian-Epirus traditional architecture
Construction: 1850 Functionality: Pinacotheca Num. of Storeys: 2

Folklore Museum Of Xanthi More about it → See it in 3D → See it in on map → What is close to it →
The complex of the two buildings is located in the old city of Xanthi, in close proximity with the Metropolis Square. These buildings were built for the family of the tobacco merchants named Kougioumtzoglou, who also owned the mansion of Vassilis Kougioumtzoglou, which is located in Andria Street 1. To the same family also belonged a similar architecturally building in Philippoupolis. In the current state of Bulgaria, which now houses the Ethnographic Museum of the city. The two buildings are In Summary: 19th century building with Macedonian-Epirus traditional architecture
Construction: 1870 Functionality: Pinacotheca Num. of Storeys: 2

Ecclesiastical Library Of Xanthi More about it → See it in 3D → See it in on map → What is close to it →
The building of the Ecclesiastical Library of Xanthi is located in the old town, in a short distance from the Metropolis Square. It is a two-storey building that follows the traditional architecture of Western Macedonia and Epirus, a type that occurs frequently in the region. The building also carries neoclassical architectural characteristics. Above its main entrance, there is an arched skylight and in the same axis, on the second floor rises a small balcony. At the right side of the entrance and the balcony, there are four In Summary: It was built in the last decade of the 19th century from Epirus craftsmen. The building was donated to the Hellenic community during the Ottoman occupation.
Construction: 1890 Restoration: 1993 Functionality: Library Num. of Storeys: 2

Bank Of Charity More about it → See it in 3D → See it in on map → What is close to it →
It is located at Metropolis square (old town of Xanthi). It was used as headquarters of the Greek consulate during the Ottoman occupation. It has also being used as the residence of the priest of the neighbouring Holy Temple of Timos Prodromos. It was donated to the Metropolis Church by the Fotiades family. This building has changed many uses since its construction. Originally it was built as a private residence, but during the Ottoman Empire occupation, for short periods it was used as the headquarters of In Summary: a two storey squared and minimal building.
Construction: 1900 Functionality: Charitable institution Num. of Storeys: 2

Analipsis Sotiros (chapel Of Christ's Ascension) More about it → See it in 3D → See it in on map → What is close to it →
The Chapel of the Ascension of Christ is located in Metropolis Square in the old city of Xanthi. Its back side is adjacent to the left side of the Ecclesiastical Library of Xanthi; in addition, the chapel shares the same courtyard with the building that houses the 'Bank' of Charity of the Holy Metropolis of Xanthi. The custom of building chapels inside houses' courtyards was widespread at the time of its construction. The chapel is a small sized ground floor structure, the construction of which is dated at the end of the 19th In Summary: 19th century building
Construction: 1900 Functionality: Chapel Num. of Storeys: 1

