WOODEN ROMANESQUE DOORS OF THE SPLIT CATHEDRAL – VIRTUAL RECONSTRUCTIONS

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Abstract: The topic of this paper is the result of the completion of the conservation and restoration project of the Croatian Conservation Institute, which has been carried out by Žana Matulić Bilač, consultant conservator-restorer from Split Department for Conservation. In the period from 2014 to 2018, she preserved the doors themselves, but also 65 of their fragments and segments which are owned by the Split City Museum. Apart from studying the history and technical properties of this monumental historical art piece (whose exceptional preservation stems partly from the fact that they were preserved in the place where carved and painted), the research also involved a much wider history of wood and carving monumental heritage on the Croatian (Dalmatian) coast, establishing already now a significant database of various professional and scientific data.
The whole venture was presented in May 2018, with a separate exhibition at the Museum of Fine Arts in Split, a scientific colloquium and a series of lectures. On that occasion, a virtual reconstruction of the original polychrome of three figural reliefs was presented, based on the mapping of the preserved micro particles of paint, and in the virtual concept of Mladen Čulić who also made a computer 3D CAD model – visualization of the structures of the gate itself. The knowledge of the original polychromy of Buvina's masterpiece has become even clearer in the meantime. A complete overview of the pigment residues on the doors, the targeted sampling and the analytical interpretation process, where Žana Matulić Bilač and her associates spent five years, has presented enough elements to propose a complete reconstruction of the original polychromy – as they could be imagined by their author, Andrija Buvina, *pictor de Spaleto* (as mentioned in the contemporary record), back in 1214. All this was at help for Mladen Čulić to create a suggestive virtual coloured model of the whole doors, painted with computer-tailored pigments. In the restoration process in 1908, the gateways were given a new visual identity of the unified colour and optical effect, but almost all traces of the original polychromy were irreversibly lost. At this time, virtual model is our only link with the possible original appearance of the Buvina's Gate, a complete and

authentically painted sculpture of the 13th century in Split. The first presentation of the virtual model was held in the same cathedral, within the Science Festival in April 2019, under the title: *De Coloribus Andreæ Buvinæ*, with the introductory presentation of Professor Joško Belamarić from the Institute of Art History of Croatia. Therefore, in the basic lines, the problems of conservation and restoration of the gate will be presented, and the method of reconstructing the original layout, i.e. the computer visualization of the constructive door elements.
Keywords: Buvina, digital reconstruction, polychrome wood, Romanesque doors, Split cathedral, medieval polychrome sculpture

Fig. 1

Monumental wooden doors of the Split Cathedral (Cathedral of St. Domnius), were made and installed by Andrija Buvina, *pictor de Spaleto*[1] (as mentioned in one of the 13th-century references), on St George's Day, 1214, in the frame of the ancient portal of the former Diocletian's Mausoleum, which in the Early Middle Ages became a Christian Cathedral (Fig. 1).

In May 2018, five-year-long conservation-restoration project of the Croatian Conservation Institute and the Ministry of Culture of the Republic of Croatia, in collaboration with Institute of Art History – Cvito Fisković Centre in Split, was presented to the public at the international scientific conference and multimedia exhibition *Wooden Romanesque Doors of the Split Cathedral – Research, Conservation, and Protection*, held at the Museum of Fine Arts in Split.[2]

1 Arhiđakon, Toma, codex from the 14th century Fontfogna library, the so-called *Codex Papali*, kept today in the Nemzeti Museum, Budapest f. 2 (copy from the 14th to 15th century)

2 https://www.galum.hr/izlozbe/izlozba/1594/; http://www.h-r-z.hr/index.php/djelatnosti/strani-skupovi/2774-drvene-romanicke-vratnice-splitske-katedrale-i

In the beginning, the project was intended to be simply a review of the current condition and some surface cleaning of the doors, to mark their 8th centennial (this being the first intervention after the major renovation by Max Dvořàk, Frane Bulić and Antonin Švimberský in 1908).

However, a thorough comparison of the current condition and the state before the 1908 renovation, had arisen a number of new questions, and the search for the answers begun at the International Scholarly Conference *The Doors of Andrija Buvina in Split Cathedral: 1214–2014,* organised by Književni krug, Art History Institute and Croatian Academy of Sciences and Arts of Split in Milesi palace, 23–24 September 2014.[3]

Adding to the contributions of the conservator and principal researcher, Žana Matulić Bilač (Croatian Conservation Institute), scholarly consultant Joško Belamarić (Institute of Art History), expert consultant Charles Indekeu (University of Antwerp) and artistic consultant Mladen Čulić (Arts academy of the University of Split), the project has included another twenty academic and scholarly papers from various disciplines, which have significantly advanced the understanding of the medieval heritage of Dalmatia within its European context. What was at first a conservation programme then took on the character of an integrated scientific research programme, expanded to include all works in wood in 13th-century Split.[4]

The project was completed and presented to the public at the multimedia exhibition in 2018, with the intent to present all the new insights and information, acquired over the five years of the multidisciplinary research.[5]

Romanesque doors of the Split Cathedral, one of the most important and intriguing pieces of Croatian and European medieval heritage, surprisingly, have not been a subject of the scientific and technical study until recently. Though the conservation-restoration was carried out *in situ*, the research was also focused on the original door elements, which were sawn off and replaced with replicas, during a major restoration in 1908. Untreated in the mentioned restoration, the original parts were then stored and forgotten at the depot of the City Museum of Split (before in Archaeological Museum of Split); being untreated they present a precious material for the contemporary "forensic" analyses.

Buvina's doors, framed by the monumental portal of the Diocletian's mausoleum, which has an aperture of 508×303 cm, are surrounded with an ornamental stone frame and a lintel that up to the renovation of 1910 was still preserved in its original shape.[6] The architect of the Split doors of the early 13th century had to create a model that complied with the Antique architectural frame of the Diocletian palace,

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3 https://www.ipu.hr/content/info/Vratnice-Andrije-Buvine_programska-knjizica_2014.pdf; *Vratnice Andrije Buvine u splitskoj katedrali: 1214.-2014. – Zbornik radova / The Doors of Andrija Buvina in Split Cathedral – proceedings:* 1214-2014, (ur.) Joško Belamarić, Guido Tigler, Split-Zagreb, 2020

4 Excerpt from: Žana Matulić Bilač, *A Historical Continuity: Research into and Conservation of the Medieval Doors of Split Cathedral, IIC,* 30 Aug 2019 – https://www.iiconservation.org/content/historical-continuity-research-and-conservation-medieval-doors-split-cathedral

5 *Romanesque wooden doors of Split Cathedral – research restoration and protection*, exhibition catalogue, May 8 – June 8, 2018, Zagreb, Zagreb, 2018: http://www.h-r-z.hr/images/stories/godina_bastine/buvina_publikacija.pdf ; Matulić Bilač, Žana, "The Romanesque Wooden Doors of Split Cathedral – Research. Conservation and Protection 2014 – 2018 / Drvene romaničke vratnice splitske katedrale – istraživanje, restauriranje i zaštita 2014. - 2018.", in: *Vratnice Andrije Buvine u splitskoj katedrali: 1214-2014 – Zbornik radova / The Doors of Andrija Buvina in Split Cathedral - proceedings: 1214-2014*, (ur.) Joško Belamarić, Guido Tigler, Split-Zagreb, 2020, 119-148

6 In 1910 lintel was replaced, as were the parts of the doorframe. Niemann explains and draws the state of the portal before the renovation (Niemann, George, *Der Palast Diokletians in Spalato*, Vienna, 1910, 66, 84–85, plate XVII). On a photograph of the detail of the portal (by Jozef Wlha), the replaced parts are better visible than today (Vienna, Bildarchiv, Austrian National Library, no. of photograph 2922 (glass plate))

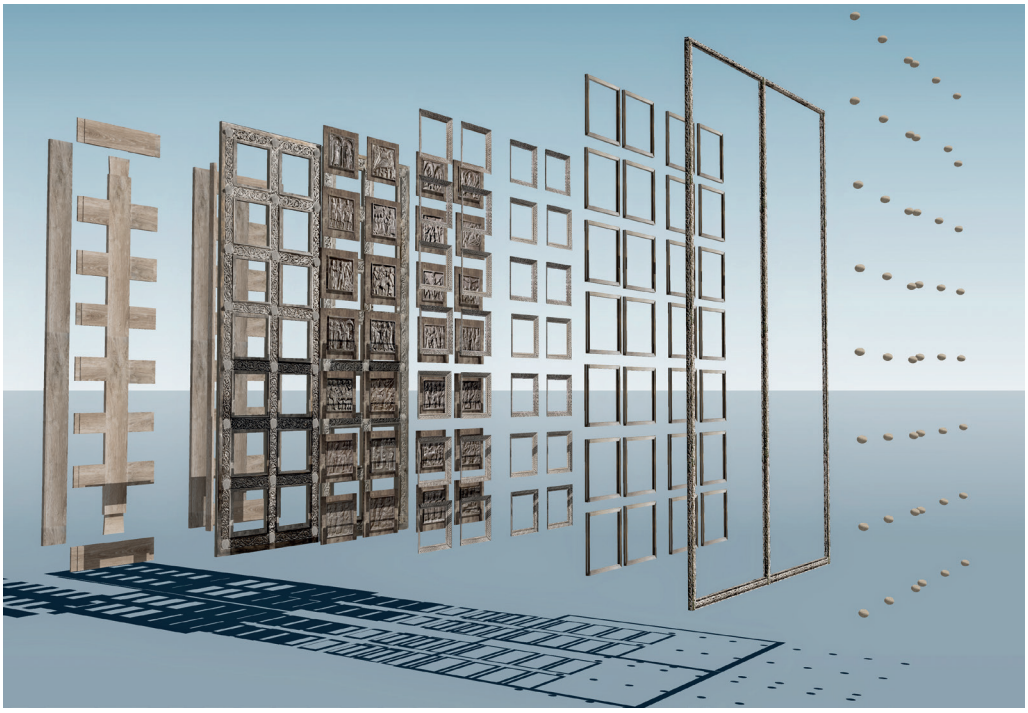

Fig. 2

primarily with the very large portal within which he had to set the iconographic idea of the whole, using the visual style of his time and its determinants.

The monumental wooden doors (526×356×13 cm, about 1,300 kg) are constructed of 380 separate elements of oak and walnut, once held together with almost 1,400 metal nails and wooden pegs; only a few of these are extant, while others were replaced with the brass screws during the 1908 renovation. The whole carved surface (about 19 square metres) is divided into 28 fields with reliefs showing the Life of Christ, from the Annunciation to the Ascension (Fig. 2).

Although preparations for the renovation of the cathedral started in 1852, in the end it was carried out no sooner than between 1880 and 1885. Just before the beginnings of the works, for the first time in their history the doors were taken down and placed against the walls of the Temple of Jupiter, or St John's Baptistery, on wooden beams reinforced with stone blocks, where for the next 28 years they awaited the ending of the works in the cathedral, and their own renovation to fit the new presentation of the interior, the portal, the entry steps and the bell tower.[7] From the appearance of the doors and the details that can be read off from the extant photos, it is certain that, in their original form, they would have represented an invaluable treasure and a real treat of chemically pure materials; historically established stratigraphies, in their original form. However, in the renovation that ensued, they were lost forever, physically and chemically contaminated with a whole range of materials.

7 During the whole of this period, there were long discussions about the way to renovate them, and the choice of the first restorer. The chronology has been reconstructed by Stanko Piplović from documents from the Bulić Archive of the Split conservation department (S. Piplović, "Historijat obnove Buvininih vratnica na splitskoj katedrali 1908.", *Kulturna baština*/40, (Split), 2014, 297–314).

Fig. 3

In the process of complete renovation in 1908, which lasted five months, with a whole series of far-going procedures, Antonin Švimberský did indeed restore to the doors a decent strength, functionality and appearance, but he changed them, irreversibly and diametrically, from their as-found properties, interpreting them in a new manner by the creation of a new physical, chemical and visual identity. Most of the procedures Švimberský carried out, are today extremely dubious and in large part unacceptable. Although the doors are today unified in form and colour down to the detailed level, the extant elements and drawings, as well as the files discovered, prove to us that their appearance today, with all the impression of integrity and coevalness, conceals a different picture. After the mapping of the preserved segments, the analyses conducted, and research into the files in line with these new understandings, it was concluded that the doors had been structurally restored once, even before 1908.

The renovation of the doors in 1908 has changed the physicochemical properties of the material, took from us the certainty of their original elements, washed out almost all of the remnants of the original polychromy, almost all of the metal material of the joints, most of the traces of the wood tools, and a large part of the original treatment of form.

The reason lies in the choice of the method for conserving the wood; all of the segments of the door, after the disassembly and cleaning, were soaked in a water bath with substances such as vinegar and spices (to kill insects), after which they were slowly seethed in hot turpentine, then rubbed and polished with a wax/resin mixture, and the polychrome was scraped off with a toothed chisel.[8] Although these materials did not get deep into the structure of the wood (only 2–3 rings), they have made detailed exploration of the style and technique of the carver's work impossible, as noted long since.[9]

That is the reason why such importance was given to the discovery of as many as 65 original segments of the doors, found in the depots of the Archaeological and Split City Museum (Fig 3).

In the 1908 operation they were sawn off and replaced with new carvings, but this has made possible the detailed technical research into the polychromy and authentic properties of the original wooden material today, preserved traces of the original carpentry and carving tools (23 types of tools were distinguished), the techniques of wood working and painting, as well as a number of historical modifications to the doors. In the renovation procedure, Antonin Švimberský completely disassembled the door into its components, including the oaken grid, from which he took out the nails, then enlarged the holes and

8 Ćorić, Franko - Jurić, Zlatko, „Obnova Buvininih vratnica 1908. godine", *Portal*/1, (Zagreb), 2010, 75–88, 78. Examining the toolmarks was ascertained that Švimberský made a toothed chisel, with which he systematically scraped off the firmest layers of the polychrome, naturally also damaging traces of the working of the wood.

9 Karaman, Ljubo, Buvinove vratnice i drveni kor splitske katedrale, in: *Work of Croatian Academy of Sciences and Arts*, vol. 275, (Zagreb), 1942, 6.

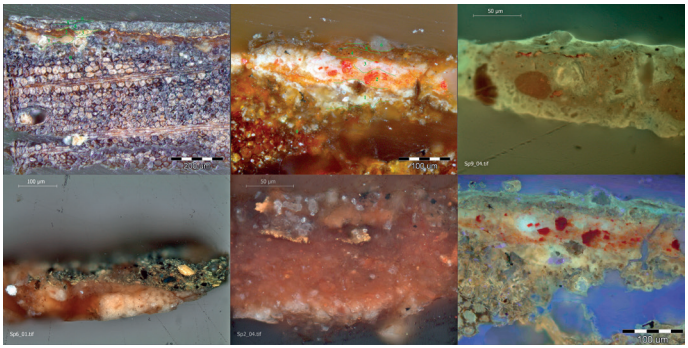

Fig. 4

reconstructed them with wood plugs; when the planks were put together again, he used 130 long brass screws. The doors were impregnated and lavishly painted.

There are some mentions of the polychromy of the doors, in authors who have dealt with this subject[10], but this research has engaged primarily with the detection of the microscopic remains of paint on the doors, and particles of pigment on the segments of the door that were sawn off.

First phase of the search for the pigment particles on the relief surface was carried out *in situ*. There is practically no flat surface on the doors, and examination with microscopes, even small digital microscopes, in the VIS, UV and IR spectra was without success since there is a thick layer of secondary materials from 1908 over the particles. Finally, with an 8× magnifying glass and a high powered beam of a caving lamp, between the layers of stain, wax and filler, under an exactly determined enlargement and angle of light, the particles shined out in clear colours and the identification of the palette of the painter began, together with the way in which individual colours and tones were built, how were the surfaces demarcated, hands and faces shaded, golden surfaces gilded and polished. Selected samples were also analysed with XRF *in situ*, but because of the high quantity of lead and heavy metals in the secondary layers the results were irrelevant. Still, in some places they did help in the detection of the certain pigments, which were then sampled and later analysed in the lab (Fig. 4 and Fig. 5).

Since the remnants of paint particles are sporadic, it is not possible to identify the complete palette of the painter and to virtually reconstruct the original polychrome of the whole doors in their current condition. However, at about the middle of the left leaf, three fields are well documented, and, in part, three more. The conclusion about the polychrome of the doors is as follows: the figural reliefs were richly painted

10 The first historical mentions (but not the colour) is given by Eitelberger von Edelberg, Rudolf (Die Mittelalterlichen Kunstdenkmale Dalmatiens, Wien, 1884.), while Jackson writes: *The whole of the carving was once gilt, and the ground picked out with red, as may be seen from traces remaining in the upper part of the doors where the lintel has sheltered them from the weather.* (Jackson, Thomas Graham, *Dalmatia, the Quarnero and Istria*, 2, Oxford 1887, 48.) On the watercolour of Petar Zečević (1849), there are no traces of paints. In several microsections secondary layers of pigments were found: orange, red, blue and gold. The visible of the basic colours, visible to the naked eye, is described by Karaman, Ljubo, Buvinove vratnice i drveni kor splitske katedrale, in: *Work of Croatian Academy of Sciences and Arts*, vol. 275, (Zagreb), 1942, 6: "This is the same harmony of colours with which the Greek masters painted… and with which the Croatian carvers sometimes enlivened their interlacing carving… the carving of wooden frames of Gothic polyptychs". Judging from these traces, up to the renovation of 1908 on every panel there were at least 10 or so square centimetres of polychrome, preserved mainly in the upper panels, and more on the right side. On the left gate there are far tinier fragments and particles. Since they did not hinder the perception of the pure wood, they were saved from being scraped off!

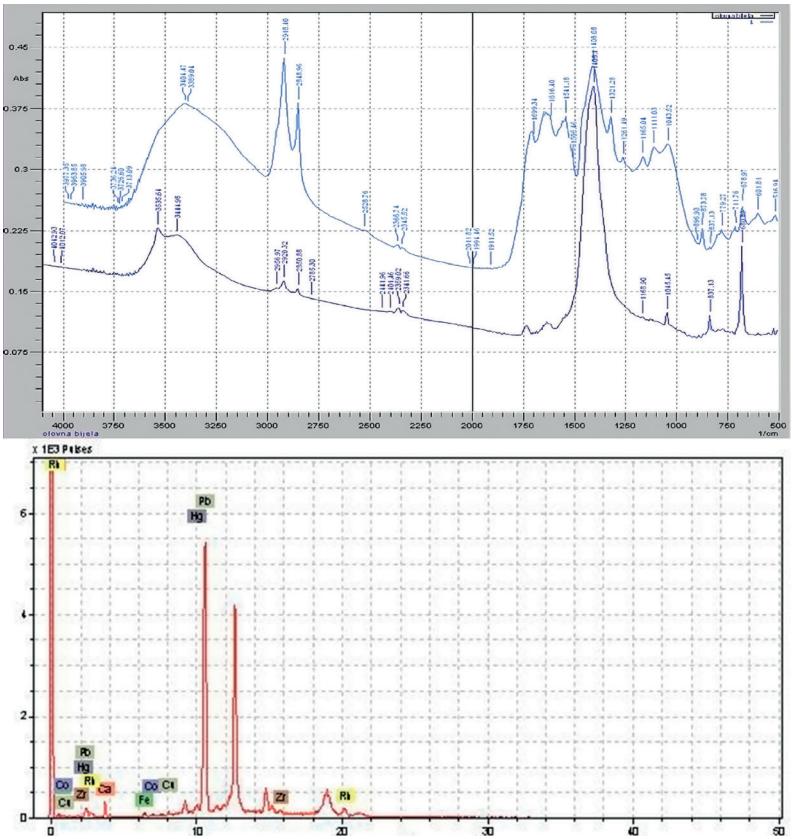

Fig. 5

with a set of pigments, used to colour robes, drapes, animals, objects, furniture, plants and architecture, in uniform colours, without shading. Recorded here were white (lead white), blue (azurite), light and dark red (vermilion, red ochre, crimson lake), grey (lead white, organic black and additions), dark green (orpiment, indigo and azurite) black (organic) yellow (orpiment, iron ochre) and gold. The flesh colours are composed of several tones in a number of uniform shades, depending on the kind and role of the person. The faces and hands were shaded by the gradation of redness. These eyes were painted, the irises too. The background in all of the scenes was azurite blue, which was found in tiny fragments on three fields. All the other segments of the doors were painted in the interplay of red and gold: straight frames, the circles around the spherical handles and the spheres themselves were red, as well as the background of the reliefs of all the ribs, and on the slanting frames, these two colours intertwine through different ornaments and combinations. All the high reliefs of the ribs were gilded, and some of the human figures in them are painted with flesh colours. Very thin, unpolished gold leafs were applied to a brownish-red ground.

The identification of the pigments was carried out in association with Cristina Thieme (Technische Universität München), who is experienced with the technology of medieval paintings on the Adriatic coast,[11]

11 Thieme, Cristina, Das Tafelbild aus der Kathedrale von Trogir, Kunsttechnologische Studein zur Tafelmalerai Dalmatiens des 13. Jahrhunderts, Reichert Verlag Wiesbaden, 2007.

while the stratigraphy of the micro layers as well as the basic materials and pigments was identified in the science laboratory of the Croatian Conservation Institute.

It was not possible to ascertain traces of protective coatings, or of the binders, because of the contamination of the layers and the permanent chemical changes they had undergone. The doors were, in conclusion, richly painted in their entirety in accordance with the iconography of the reliefs and the meaning of the figures, framed with a two-colour frame of relief bands that were gilded and created a marked reflection of the light and thus remained in the foreground, just like the golden decorative frames of the coffers. From a distance, they spoke out just in the same way that the pages of medieval books spoke out: large, open and easily readable, visible and clear from each point around the cathedral and in front of it.

In Split, the 13th century was a golden age of historical prosperity. Yet, that era of its artistic heritage includes only nine surviving monuments in wood, which is a very small number in comparison to the postulated original corpus, and so new data are even more precious.

After the research into the construction of the doors (3D CAD model of the construction) and the remaining particles of paint, the original appearance of the doors could indeed be conjured up today, but only with virtual media. The discovery and analysis of tiny particles of the original polychrome under the deposits of secondary layers, the oldest one carved and painted wood in Dalmatia, have made possible an understanding of the pattern of the original painting, and also its virtual reconstruction (Mladen Čulić, University of Split), putting before us a marvellously suggestive approximation of its complete original appearance.

Well founded and proven colour palette was derived from the gathered data, and in 2018 first virtual reconstruction of the original coloured appearance was visualised in every detail with digital brushes in the interpretation of Mladen Čulić (tools: Wacom Grapphire classic 4, Adobe Photoshop CS6). *The hypothetical reconstruction of the whole* of the painting of the door was then completed in 2019, with the use of the previously established palette composed according to the overall scientific knowledge, redesigned with a digital media.[12]

Partial reconstruction of the carving was also executed before the colouring itself, as the lower row of reliefs and some of the relief bands are heavily damaged to the point of illegibility, but could be digitally

Fig. 6

12 Materials that Mladen Čulić brought together are available at: https://www.mladenculic.com/3d-digital-reconstructions

Fig. 7

reconstructed by the use of the clone brush, not by digital 3D modelling, but by cloning, "quoting" Buvina himself, using different parts of the surrounding fields to rebuild the missing faces, legs, robes or other missing elements. (Fig. 6)

In a similar manner, outer laths were recreated and the central one repositioned to the left leaf as it was its original position.

Virtual colouring can give satisfying results only if the underlying photography is of a high quality and high resolution. Though photos of the doors before 1908 restoration have certain quality as they capture the sharper form and more detailed texture of the reliefs before the treatment, and later ones are lacking that sharpness and they have too smooth and too shiny appearance, it was important to have certain uniformity of the whole, and more recent photo material was available in higher resolution and with uniformly lit, so mostly Ž. Bačić's works were used to create one ultra large composite template that was detailed enough to be coloured and possible to build, and look natural at the same time. It is almost impossible to make a quality shot of the doors, with a uniform light, because of their dimensions and fixed positioning in the cathedral so the colouring template had to be constructed from 28 different photos, 24 from Živko Bačić, 1 from Jozef Wlha (before 1908) and 3 from Robert Matić (also recent photos) and it's pixel size is 14000×20000 pixels and almost 3 GB size. Best photos were chosen, though far from the ideal situation, and it was still a challenge to blend them all together because of the different shooting angles, also they had to be warped, distorted, resized and repositioned to somehow fit and to make a whole of the doors together.

Next step was to brighten the dark brown wood colour of the relief; so the whole image was "overpainted", as if it was a real wooden panel, sized and primed, coated with the pale white *gesso*, to create brighter and neutral colour base which also makes it possible to colour it later with transparent layers, giving it "thin coloured glaze over the chalk" appearance. This was achieved by adding the new layer of white colour and blending this layer carefully with soft light and overlay blending effects, caring not to dim the contrast and the play of light and shadow of the carving photo, thus not dimming the plasticity of the carving, or its surface texture.

Fig. 8

Then, similarly, all the surfaces that had to appear gilded were coloured by overlapping them with the golden yellow colour in the separate upper layer. The underlying photo-template's highlights and shadows were then manipulated by the burn and dodge tools, darkening the existing shadows or brightening the highlights, to mimic all the shiny golden effects and contrasts.

It is important to emphasize that because of this basic intention, which was – not to lose Buvina's relief or its texture, entire colouring process was subdued to its preservation and colouring was never as

intensive, thick and opaque as it was most certainly done in the original polychrome. It is very easy to over-colour a photo, to annul its beauty, and to make a virtual reconstruction look inconsistent and exaggerated. What was more important than showing the original colours in their full splendour, was to give an impression of the synergy of the colour and form, to bring a new light on these dark, monochrome Romanesque doors, but at the same time, to preserve, and not to harm the beauty they still have.

Colouring continued with the next layer that was used to create another dominant colour, which is red background of the gilded surfaces and red frames surrounding the relief fields. Then in the fourth layer, azurite backgrounds of all the 28 fields were added, complementing the whole with the third dominant colour, thus creating the strong base of red, yellow (gold) and blue. Then, the flesh tones were added to differentiate the faces, hands and legs from the robes. Since all the layers are separate, it is easy to manipulate them individually to harmonize the colours. The colouring continued in separate layers, colouring the robes of different colours, and other represented objects and surroundings, finally adding hair colours and face details in the final layers. More than 30 layers were used to finely manipulate and match colours. (Fig. 7)

Since the upper part of the doors is better preserved, the colouring was much easier and results were better; but as we go lower, the quality of the relief deteriorates, and with it the quality of the photos and the digital reconstruction of the polychrome too. (Fig. 8)

ILLUSTRATIONS

1: Romanesque doors of the Split cathedral, Andrija Buvina 1214; before and after the 1908 restoration, Jozef Wlha 1907 / Živko Bačić 2008
Романичка врата сплитске катедрале, Андрија Бувина 1214; пре и после рестаурације 1908. Јозеф Влха 1907 / Живко Бачић 2008
2: Structural assemblage of the doors according mapping of the structural segments M. Čulić, 2018
Конструктивни склоп врата према мапирању структурних сегмената М. Чулић, 2018
3: Bevelled frame labelled 52L, Split Municipal Museum, G. Tomljenović, 2018, Image courtesy by Croatian Conservation Institute
Укошени оквир с ознаком 52Л, Музеј града Сплита, Г. Томљеновић, 2018, Слика љубазношћу Хрватског рестаураторског завода
4: Pigments visible in cross-sections, sampling Žana Matulić Bilač, cross sections and analyses Marijana Jelinčić (Croatian Conservation Institute) and Cristina Thieme (Technische Universität München), Images courtesy by Croatian Conservation Institute
Пигменти видљиви у пресјецима, узимање узорака Жана Матулић Билач, пресјеци и анализе Маријана Јелинчић (Хрватски рестаураторски завод) и Цристина Тиме (Технички Универзитет Минхен), слике љубазношћу Хрватског рестаураторског завода
5: FTIR, Arts Academy of Split; XRF analysis, Image courtesy by Croatian Conservation Institute 2017
ФТИР, Умјетничка академија у Сплиту; XRF анализа, Слика је добијена љубазношћу Хрватског рестаураторског завода 2017
6: Virtual reconstruction of the relief, M. Čulić 2019 (photo Živko Bačić)
Виртуелна реконструкција рељефа, М. Чулић 2019 (фото Живко Бачић)
7: Process of coloring and the final result according to the proved basic pattern on 3 reliefs (Žana Matulić Bilač), M. Čulić 2019
Процес бојења и коначни резултат према доказаном основном узорку на 3 рељефа (Жана Матулић Билач), М. Чулић 2019
8: Before and after the digital colouring, 10 relief fields according to a proved results on 3 reliefs and interpretation based on Mladen Čulić proposition 2019
Пре и после дигиталног бојења, 10 рељефних поља према доказаним резултатима на 3 рељефа и интерпретацији на основу предлога Младена Чулића 2019

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ДРВЕНА РИМСКА ВРАТА СПЛИТСКЕ КАТЕДРАЛЕ – ВИРТУЕЛНЕ РЕКОНСТРУКЦИЈЕ

Резиме: Комплетан преглед остатака пигмената на вратима, циљаног узимања узорака и процеса аналитичке интерпретације, на чему су Жана Матулић Билач и њени сарадници провели пет година, обезбедио је је довољно елемената за потпуну виртуелну реконструкцију изворног полихрома – какав је давне 1214. године могао да замисли његов аутор Андрија Бувина, *pictor de Spaleto* (како се помиње у савременом запису). Све ово помогло је Младену Чулићу да створи сугестиван виртуални обојени модел целих врата, обојен пигментима који су прилагођени рачунару. У процесу рестаурације 1908. године, врата су добила нови визуелни идентитет унифициране боје и оптичког ефекта, али су готово сви трагови првобитног полихрома били неповратно изгубљени. У овом тренутку виртуални модел једина је веза с могућим изворним изгледом Бувининих врата, целовите и аутентичне скулптуре осликане у 13. веку у Сплиту. Честице пигмента доказане су само за 6 поља рељефа. За *Масакр невиних*, *празник Ваведења Господа нашега Исуса* и *Исусово крштење у реци Јордан*, пронађена је пуна палета, а за *Свадбу у Кани*, *Христово искушење* и *Благовести* само делимично. Ово треба узети у обзир током посматрања реконструкције јер, иако је створена по аналогији и естетској логици, и иако су неке честице пигмента доказане и за остатак врата (трагови злата, цинобер црвене, неки окер пигменти и неке азуритне позадине) остатак врата је ипак још увек само уметнички предлог и сигурно није прави изглед оригиналног полихрома. Важно је нагласити да је због ове основне намере – да се не изгуби Бувинин рељеф или његова текстура – читав поступак бојења био подређен његовом очувању, а боја никада није било тако интензивна, густа и непрозирна, као што је то било сасвим сигурно у оригиналној полихромији. Врло је лако превише обојити фотографију, поништити њену лепоту и учинити да виртуелна реконструкција изгледа недоследно и претерано. Оно што је важније од приказивања оригиналних боја у њиховом пуном сјају, било је да се створи утисак синергије боје и форме, да се на ова мрачна, монохромна романичка врата унесе ново светло, али да се истовремено сачува без оштећења лепота коју још увек поседују.

Кључне речи: виртуелна реконструкција, виртуелна полихромија, Бувина, дигитална реконструкција, полихромно дрво, романичка врата, Сплитска катедрала, средњовековна полихромна скулптура